

The National Locksmith®

\$5.00

CODES
'98 SUBARU FORESTER
30001-37850 Part 1
page 148

April 1998
Volume 69, No. 4

Two
ways
in...

**BAD GUYS
DON'T KNOCK!**

OUR HOT NEW
CODE SOFTWARE!
INSTA-CODE

see
page 45

Sell
peace of
mind
to your
customers.

Details on
page 19

On The Cover...



There is always more than one way through a door lock, with a key and without. Make your customers aware of how to prevent those unwanted guests.

Publisher Marc Goldberg

Editor Greg Mango

Art Director Jim Darow

Production Director Edgar Shindelar

Technical Editor Jake Jakubowski

Director of Automotive Education
Tom Gillespie, CML

Senior Writers

Michael Hyde, Dale Libby, Dave McOmie,
Sara Probasco

Contributing Writers Tony Blass, Joe & Dee
Bucha, Carl Cloud, Ron & Chris Curry,
Sal Dulcamaro, CML, Steve Gebbia, CML,
Giles Kavelage, Jim Langston, Tom Lynch,
Tom Mazzone, Don Shiles, Robert Sieveking

Special Correspondent Bill Reed

Director of Sales & Marketing
Jeffrey Adair

Advertising Account Manager
Debbie Schertzing

Circulation Manager Tom Dean

Accounting Manager Sheila Campo

Production Assistants Kim Fryer
Dave Krofel

Administrative Assistant Kelly Quinn

Shipping Manager Dan Garrity

National Publishing Co.

The National Locksmith® ISSN #0364-3719 is published monthly by the National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861. Periodicals postage paid at Bartlett, Illinois 60107 and additional mailing offices USPS 040110. Subscriptions \$41.00 per year in the USA; \$54.00 per year in Canada; \$67.00 in all other countries. Single copies \$5.00 each. Postmaster, please send change of address to National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861. ©1998 by the National Publishing Company. All rights reserved. Printed in the U.S.A.



The
Audit
Bureau
Member



Questions or problems with your subscription? Call (773) 348-6358

For all other inquiries,
call (630) 837-2044, fax: (630) 837-1210,
or E-Mail: natlock@aol.com
See us on the World-Wide Web:
www.TheNationalLocksmith.com

CONTENTS

The National Locksmith April 1998 □ Vol. 69, No. 4

FEATURES

**COVER
FEATURE!** 19

I'll Huff & I'll Puff & I'll Knock
Your Door In

26

M.A.G. Designer Security
Products

30

Site-Key/Site Reader By Medeco

34

Basic Business Entities For
Locksmiths

37

The Bookmark

40

Servicing The 1997 Buick Park
Avenue, Part 2

54

Profits With Access Control

59

Mystery Safe

66

Quick Entry Update — Nissan

70

IC Lock Introduction, Part 1

74

Literature & Brochures

80

As The World Turns Upside-
Down, Part 2

85

Modern Safe Locks Tech Bulletin

88

Delayed Egress Devices

112

Advancements In Automotive
Technology

128

No Holds Barred-Mechanical
Sliding Door Locks

143

Safe Restoration, Part 4

CODES 148

1998 Subaru Forester, Part 1

DEPARTMENTS

5 COMMENTARY

6 MANGO'S MESSAGE

10 LETTERS

14 SECURITY CAFÉ

92 BEGINNER'S CORNER

98 TECHTIPS

116 LIGHTER SIDE

118 THRU THE KEYHOLE

120 ROAD RALLY

126 REED REPORT

160 BUSINESS BRIEFS

166 TEST DRIVE

**Click on the article
you wish to read**

COMMENTARY



<http://www.TheNationalLocksmith.com>
User name: national User ID: G5fh84

Introducing InstaCode software from *The National Locksmith*!

I have to take a deep breath as I sit here at the keyboard to write this Commentary. That's because I'm really excited to tell you about the latest product introduction from *The National Locksmith*.

What I want to talk to you about this month is our brand new code software called InstaCode.

InstaCode has some revolutionary features that make it a total code solution. As a locksmith you want fast, easy to use, affordable code software. You also want paper code books for those times when you want hard copy in your hands. And thousands of you use the HPC 1200CM™, so you also want code cards for every code series.

Our new software gives you all that in one package. InstaCode is quite easy to use and is very fast. When you have looked up a code in the program, all you need to do is touch the Print Card button and instantly you're printing a working code card for your HPC 1200CM™.

When you are sitting on the window that shows your code series, you can press the Print Series button, and the entire code series prints out to your printer. This allows you to customize your own code books for the bench and van.

The price for InstaCode is attractive, and the only feature that will cost extra is the Print Series function. However, as a limited time offer, that function comes along free. After the introductory period is over, it will be priced as an option. That's the only optional feature; everything else is built-in, and even that one is free for a limited time.

A couple of other features will be very useful to the locksmith. The Find Bitting button allows you to give a partial bitting when the whole bitting is not known. The program then lists out all possible bittings. Then you can use the Cutting Tree button to progress all those bittings so that you can try them all on the minimum number possible key blanks.

The Client feature is one of my favorites. You can store client data, including VIN numbers for cars, and the code the car uses. Later, you can search for the client's data and make a key without ever leaving the shop. This is especially useful for storing car dealer data for numerous cars when you may work on the vehicle again.

Also, you can install InstaCode on all the computers owned by your shop for no additional cost. That means you can even use the software on your laptop and carry it on the job with you.

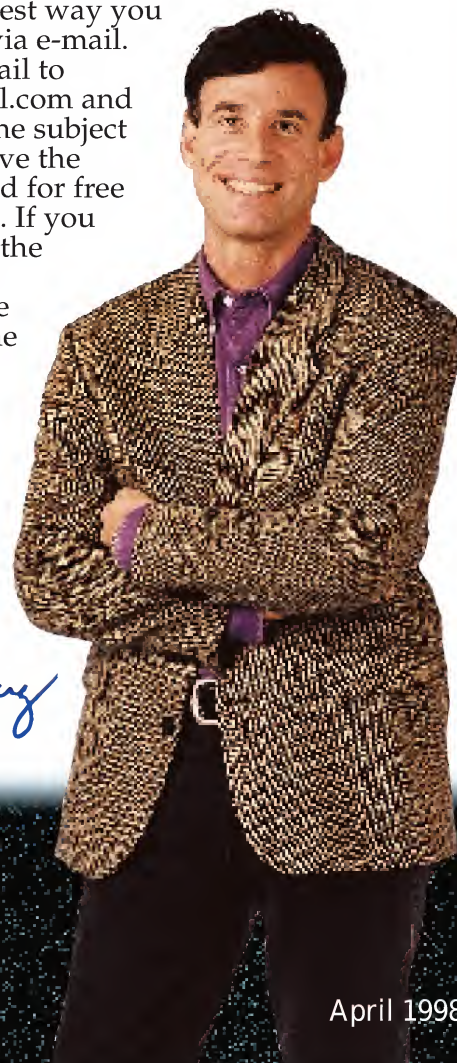
There's a whole lot more to know about InstaCode, and for more information you can turn to the ad on page 45.

We have a demo available now and the fastest way you can receive it is via e-mail. Just send an e-mail to NATLLOCK@aol.com and type "demo" in the subject field. You'll receive the demo quickly and for free via return e-mail. If you prefer to receive the demo by regular mail, you can use the coupon on the ad to order one for only \$5 shipping and handling.

Happy code cutting!

Marc Goldberg

Marc Goldberg
Publisher



Join our free E-mail list!

Receive locksmith info by E-Mail
Write us at: NATLLOCK@aol.com

April 1998 • 5

Mango's Message

How many times have you done a big boo-boo when providing a service for a customer? Did you admit to it, try and cover it up and hope they wouldn't notice, or pay the consequences? Go ahead you can confess, nobody will hold you liable for past mistakes. We've all made them, some more than others, but if you've been in the field long enough, you have a skeleton or two in your tool box. It comes with the territory.

I can still remember one of my first jobs to go awry. I know, you're shocked, dismayed and horrified at the thought of me possibly making a mistake, I am too, however, as unfathomable as it may seem, it has happened. (I feel like Jimmy Swaggert proclaiming at the pauper before a congregation of parishioners "I have sinned.")

At one point in my career I serviced a large new car depot. This depot was essentially an immense holding pen with thousands of new cars that were stock piled awaiting transport to local dealers. The vehicles were brought into the yard by rail car carriers, then unloaded by a team of workers. It was like one big cattle ranch with a bunch of cowboys rustling the heard. It was not unusual for them to unload several hundred cars in a day.

The way the system worked is: each rail car carrier would be chock full of cars and there may be 20 or more carriers. In each carrier all the vehicles would be locked except for one. The one that was unlocked would be the one that contained all the keys to every vehicle within that rail car. So if there were 20 rail car carriers with a total of maybe 250 to 300 cars, all would be locked



Unforeseen Obstacles

except for 20 of them. The keys were usually placed in the glove box.

As you could imagine, it wasn't uncommon for the vehicle that contained the keys to be locked as well. The catch was, nobody knew

which car contained the keys. When the rail car carrier would stop at the car depot, the workers would scavenge through each rail car searching for the one that was unlocked, retrieve the keys and then proceed to unload the carrier. If none were unlocked, it was a guessing game as to which one was the diamond in the rough. That's when I came into the picture.

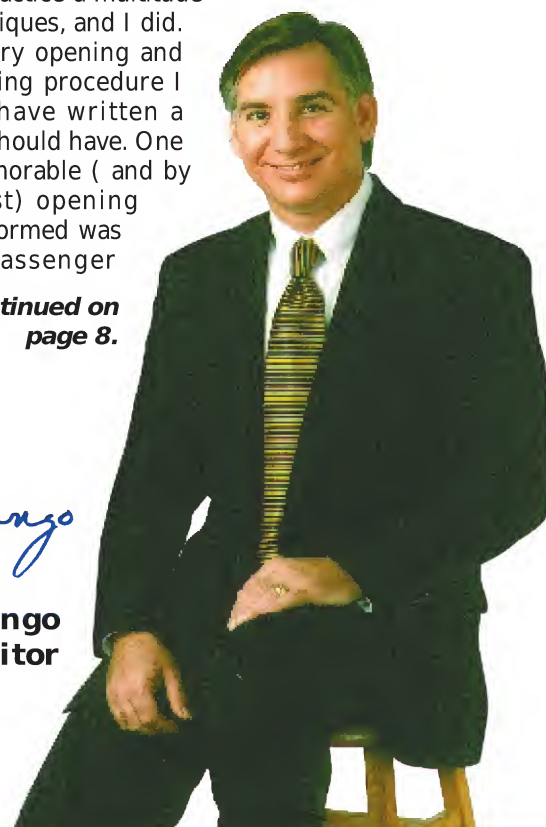
It wasn't uncommon for me to receive a call on a weekly basis from this customer to unlock a few (sometimes quite a few) cars in search of the illusive keys. It also wasn't uncommon for more than one rail car to have all its contents locked up. This was a fun job because I saw all the new vehicles, honed my opening skills and it was different.

I would climb on the rail car like a monkey with my car opening tools draped across my back and proceed to unlock every car in my path until the pearls were found. This was not only good experience, but because of the sheer number of common vehicles I would see, it allowed me to practice a multitude of opening techniques, and I did. I performed every opening and alternative opening procedure I knew. I could have written a book. Probably should have. One of my most memorable (and by far the quickest) opening procedure I performed was the broken passenger

**Continued on
page 8.**

Greg Mango

**Greg Mango
Editor**



Mango's Message

Continued from page 6

window technique. Unfortunately, I hadn't planned it that way.

It was a blazingly hot day when this customer called me to open a vehicle with lost keys. When I arrived, I found that the car had already been unloaded and parked in the yard. It was a Pontiac Grand Prix and the workers had somehow lost or misplaced the keys. As the manager stood with me, I pulled out my wedge and proceeded to spread the door. I had just begun to insert the wedge between the weatherstripping and window when the window literally blew out. I was stunned. I was so shocked I couldn't even say anything. The yard manager and I just stood there for a moment in disbelief, staring at a pile of fragmented safety glass piled on the passenger seat.

Lucky for me, after opening literally hundreds of cars for this customer and up until this time having an impeccable record, the yard manager was well aware of my abilities and knew it was a freak accident. As dollar signs were swimming in my head estimating how much it would cost me to have this window repaired, the yard manager turned to me and said "Don't worry about it Greg, I'll report that it happened in transport." Wiping the sweat from my brow, I reached inside, opened the door, turned to the yard manager and said "This ones on me."

That incident occurred almost fifteen years ago and was the first and last time I ever broke a car window. However, it wasn't the last time I broke a window. Oh no. No more small time car stuff for me. I was moving on up, and with that experience under my belt, I figured I'd try my hand at breaking a window stile in a home.

Recently, I had an article topic to cover (Door Reinforcement Hardware) which consisted of taking a typical standard residential door and reinforcing it with a M.A.G. Install-A-Lock, Don-Jo Armor Strike, Mul-T-Lock High Security Deadbolt and Door Viewer. I assigned this article to Dale Libby, and for those who know Dale, his specialty is safes, not door hardware installation. He really didn't want to do the article, but there was no one else available and I wanted to do it locally, so Dale got the call. Suffice it to say, he fought me every step of the way. To alleviate his resistance, I told him I would find a location to install the hardware and I would give him a hand in doing so. Little did he know what he was in for.

It was a rather chilly afternoon when Dale and I arrived at the residence chosen as our guinea pig. Dale broke out his tools — grumbling the whole time — and we went to work. First we, or rather Dale (I played the role of acting supervisor) installed the Mul-T-Lock deadbolt. No problems here and it actually worked when finished. Then we proceeded to install the Don-Jo Armor Strike (under the ever watchful eye of acting supervisor Mango).

The front door on this particular home had two full length thermal window stiles on either side of the door. This was not the best design for our purpose, but it had to do.

The Armor Strike is over 12" long and came with 3" mounting screws which we were obviously not able to use. We cut the screws down and proceeded to install the strike. The first screw went in without a hitch. The next one, however, was another story.

As Dale secured the next screw, the window stile suddenly popped as if it had been shot with a bullet. Since it was a safety glass thermal pane, the entire inner pane checked, but remained in place (see Photograph). Luckily the window did not shatter.

It was a blast from the past and once again I was in a paralyzing state of shock. So was Dale. I looked at Dale and Dale looked at me like two puppy dogs who just relieved themselves on the living room carpet.

What we failed to take into consideration was that the screw hole placements in the Armor Strike are offset, as they usually are. The position of the offset was just enough to place the screw smack dab into the side of the window stile. Oops!

Well, you can imagine that our primary concern was how would the home owner take the news that we just destroyed his window stile. Surprisingly, I must admit, he took it rather admirably. You see, it was my home. If there's any consolation, at least it wasn't a customers home.

In your illustrious career of locksmithing, unforeseen accidents will happen, some big ones, some small ones. Whether they happen out of haste, lack of knowledge, experience, minor oversight, or all the above, they will occur. Hopefully for you, these minor setbacks will only occur once every 15 years, and hopefully for me, I can get my window replaced. Let's see, I can call the police, say it was an attempted break-in, and turn the report into the insurance company. No, that won't work. O.K. I'll tell Marc...

TNL



A P R I L 1 9 9 8

Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

Who They Gonna Call?

Just got back from my gravy job. What's that you ask? Well, I work for two Ford dealerships and new Pass-Key system in the cars that we supposedly can't make the keys for. Well I don't know about you, but I get to make all the keys for these two dealers when they lose the keys to a vehicle. I admit that I don't sell them PATS key blanks - they pay less than I do - and yes, I don't get to duplicate keys for them, but by gollies, I have a box of about 125 pairs of brand new keys that came out of brand new locks that they replaced under warranty and the customer wanted to keep the same key. Guess who repins the new locks? Me.

The other dealer doesn't realize how the system works and throws the door keys away when they put in a new ignition lock. (You gotta love those locks!) Wonder who they call to make a door key? Me.

So, when a new '98 car with no keys comes in and they have no one that can make the keys from scratch, who do they call? Me.

Now, my Chevy dealer has an interesting situation. He has three Curtis Clippers, the stuff to do most of the cars, and when the request comes in for a key by code, who makes the key? Me. Their general manager can't see spending the money on new cams and carriages that are worn out.

So, fellas, while you worry about losing out to the new PATS system, I can sleep nights knowing I will have a good job supply the next day.

Cultivate those dealers! The pay is good, the hours are good, so what's to complain about?

*John Quen
E-mail*

Put Up or Shut Up

This letter is in response to Kenneth Nutt (January 98). I, too have used manufacturers code services on several occasions. I have yet to be denied this information, yet, I know that it will happen.

Having the "privilege" to practice in a state that requires licensing, I feel it is now the time for ALOA, The National Locksmith, Locksmith Ledger, GCLA, etc. to put up or shut up.

These entities have pushed, and probably rightfully so, for the licensing of locksmiths. Why is it that after the background checks, finger printing, insurance, and letters of testament that are required to meet the licensing regulations, license ID is not the accepted form to authorize the release of code information?

What exactly did licensing get us? The police and wrecker drivers still open cars. Locksmith tools are still sold in the open market. Enforcement of the licensing law is weak at best.

If these associations and accepted professional publications want to back up what they believe, they



should organize and intercede with the manufacturers to establish the criteria that would allow licensed locksmiths to be received in the professional manner they are demonstrating by complying with and receiving licenses. Their state governments obviously feel safe in granting these licenses.

*Steve Phillips, CPL
Illinois*

Knock! Knock! Nobody's There!

Just finished reading Mango's Message (Knock! Knock! Who's There?) in the February issue and was interested in learning that someone other than me had heard of the Door Butler. I had steamed over my involvement with PSI and realized something was wrong, but it was too late to do much about it.

Over a year ago, back in November of 1996, I received a flyer from PSI saying they were about to go public via local TV stations in my area and I had until December 6, 1996 to get in on the promotion as that was the dealer close out date.

Continued on page 12

The National Locksmith
1533 Burgundy Parkway
Streamwood, IL 60107
Attn: Editor

Continued from page 10

Using my VISA, I ordered package "C" and when the merchandise had not arrived within a month, I called them to see where my package with the four Door Butlers was. I was informed that it was on the way and would be shipped out within the week. I waited and called them again, and was informed the response was so great from their promotion that they were behind in their orders.

I note that my order for the product was December 2, 1996 and my VISA card was charged on the 4th of December. To make a long story short, I did receive four Door Butlers, but never received the "free display stand."

There are still four packaged Door Butlers on the shelf, unopened. Would you like one?

I had the feeling that I was being taken due to the unprofessional conversations I had with whoever was at that number you are encouraged to call. Anyhow, the enclosed literature might be of interest to you. They may be legit... maybe not; but the enclosed letter saying they were having trouble with their management explains a lot. Hope this helps you out, you are the first person to mention "Door Butler." I had made numerous calls around the country to supply houses and they had never heard of them.

Dan Boone
Vermont

Run, Run, Run, Run-Around

If you think you got the run-around just trying to get information on the Door Butler, I'm sure you and your readers will enjoy my story.

I was contacted by PSI Securities by phone about their Door Butler. I asked them to send me literature and a tape to look over before I agreed to buy. Everything looked great and I was impressed, so on January 31, 1997 I purchased three units and a display stand for \$196.16. Everything looked great for four to six weeks, then things went down hill fast.

After the waiting period, I started to call checking on my product. At first I got some reasonable answers to all my questions, but after a few months I couldn't even get them to return my phone calls, but they do send out excuse letters, so you know they were getting the messages.

Wanting a refund because of no product and no returned phone calls,

things became impossible due to the fact that I made a mistake by leaving a message on their answering machine requesting product or a full refund.

After lots of calls to PSI, I decided to look into this a little more, by this time I'm furious. I called the Secretary of State (317-232-6681) and ask for the corporations department). I did find out PSI is sole owned by Thelma Milam, 555 Tacoma 46220. NO phone listing is available.

Greg, your suspicions are right, this is a well devised hoax, in my mind. I have learned to deal with my suppliers and not so-called new suppliers unknown to me and unknown to others in my business. No more Jack-O-Lopes or fur covered fish for me. Richard Kocher

Texas

Just Collecting Dust

I was one of the jerks that did buy into the Door Butler from PSI that Greg Mango talked about in February. I received exclusive rights for a 50 mile radius. What a deal, except the darn thing doesn't even work.

Yes, I too waited about three months or more and a lot of phone calls before the thing came. I also got the run around that they were getting a new manufacturer to produce their product and production wasn't up and running yet.

After several attempts to get the thing working, I went to another locksmith friend to see if there was something I wasn't doing right. That's only because I couldn't get these people back on the phone for help. Like I thought, it wasn't me, my friend couldn't get the thing working either.

Then I went to a friend that works on electronics and he also couldn't get the thing to work like it's supposed to. Finally I got someone on the phone from Door Butler again. Their response was that I wasn't doing it right and they wouldn't take it back, but when I asked what I was doing wrong, they said just follow the directions.

As of today it is just sitting here collecting dust. Wesley Mayes
Pennsylvania

Editors Note: The previous three letters are just a sampling of responses I received in regards to the "Knock! Knock! Who's There?" editorial about PSI Security

and the Door Butler. Thanks to all for your response and to Dan Boone for the Door Butler that will be added to my collection of now defunct products.

I thought it would only be fitting to close this topic with the following excuse letter PSI sent out to some of its so called dealers, and just so you know, PSI is no longer in operation.

PSI Security, Inc.

Dear Dealer,

As you are undoubtedly aware, our project has experienced serious difficulties in the last few months.

One year ago we began production of "a good idea," the Door Butler. As a combined effort of a small group of shareholders, engineers and business expertise- our troubles began with a disgruntled member of our staff sabotaging our software and disrupting activities for weeks. Earlier this year, a further staff disruption shifted management and suppliers. An electronics supply representative completely "dropped the ball" and left us without components through early summer. Shipments will begin again in late September.

To make a long story just a bit longer- we are reorganized and feel confident we have straightened out our troubles. Please read the enclosed new brochure. Millions of these are being printed for use in our direct mail program.

The middle of September our phone lines will again be manned. At about the same time we will begin our direct mail campaign to virtually every home in our dealers' areas. You will be receiving mailer samples and marketing briefs for verification of zip code targets in your area. Stick with us and over the next six months with the completion of our national mail campaign and we will bring you lots of new business, including new home construction. These mailers use envelopes of the type used herewith. The Door Butler is available only through the American Locksmith.

Please accept our sincere apologies for our temporarily dysfunctional status. Those locksmiths that remain dealers will receive on going exclusives and the benefit of all marketing promotion. Please remain patient, your participation will pay off- thank you.

Sincerely,
Lewis Ladd
General Manager, PSI Security Inc.

TNL

Security Café

**DROP IN FOR
TOOLS, TECHNOLOGY
& EQUIPMENT**

AMSEC BF™ Series



AMSEC's popular BF Series UL Listed fire/burglary safes are now accented in a durable granite textured finish, chrome plated dial and an elegant plush velour interior.

The BF Series safes carry both the UL class 350°, 1 hour rating, keeping valuables safe from temperatures up to 1700°, and the RSC residential security container burglary rating. In addition, each safe comes equipped with an exclusive internal anchoring system and adjustable shelves to suit your particular needs.

Each safe carries a lifetime replacement warranty.

Glynn-Johnson Flush Bolts

A redesigned line of automatic and constant latching flush bolts introduced by the Glynn-Johnson Division of Ingersoll-Rand's Architectural Hardware Group, has passed UL fire tests. Some models use a single top bolt with a special bottom bolt that does not require a floor prep. In addition, the new patent applied for design requires considerably less force to activate than previous versions.

All of the new flush bolts are designed for use with vertical rod exit devices, mortise lock exit devices, mortise locksets, and cylindrical locksets.

Securitron Introduces First Self Aligning Shear Lock

Securitron Magnalock Corporation introduces the first electromagnetic shear



lock design that does not require special electronics, timers or sensors to assure position of the armature to lock the door.

The Self Alignment Magnalock® (SAM) utilizes a patent pending conical button technology to guide the strike plate into the proper position. This innovative design allows the SAM to be re-powered instantly assuring instant relocking without the problem of early strike plate capture causing diminished holding force.

The SAM is backed by a five-year warranty and toll free product support from the US or Canada.

StrongArm's Improved Mini Rig Pro

The safe drill rig has ten new features. They include:



Chicago Lock Introduces Four New Service Kits

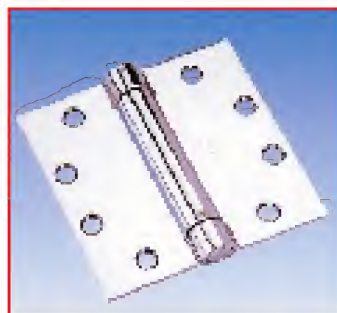
Chicago Lock Company has introduced four new service kits that contain the

necessary factory-quality parts for almost any cabinet lock job a locksmith might be called upon to repair. The four factory service kits are: ACE® Tumbler, ACE® Locking Cams, Singles Bitted Locks and Double Bitted Locks.



increased drilling power, additional bearings, increased drill bit diameter capacity, internal thread cleaners and more. The Pro Kit includes the new Dual Action Dial Puller. Now one puller removes S&G, Mosler, LaGard, X-07 dials without damaging the lock. New X-07 template with 5 drill points and LaGard electronic lock rig mounting templates.

Stanley Adds Stainless Steel Spring Hinges



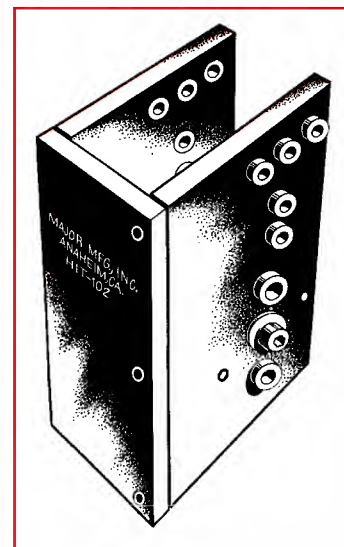
Stanley Commercial Hardware has introduced 304 grade stainless steel spring hinges to compliment it's full line of steel spring hinges.

The stainless steel models were created to meet the specific needs of installations

in coastal areas and other locations where corrosion of many other metals is an on-going problem.

Stanley's 2060R series of 3-knuckle spring hinges is particularly well suited for use in corridors, entrances and in stairways.

Major Manufacturing HIT-102



Major Manufacturing has announced the new HIT-102 installation tool for Simplex 1000 and Alarm Lock Trilogy 2. The new HIT-102 features

SECURITY CAFÉ

hardened drill bushings on both sides of the template so function holes may be drilled from either side of the door. All function holes are located including through bolts and anchor lugs for the lever set used on the new Alarm Lock Trilogy T2.

Arm-A-Dor™ Double Door Adapter Kit

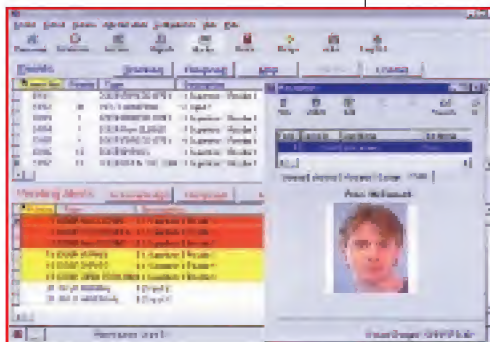


Sargent & Greenleaf has introduced its new Arm-A-Dor Double Door Adapter Kit offering the same combination of security and life safety benefits of the Arm-A-Dor secure panic hardware but now for the double door application as well.

The adapter kit provides a strike that is secured on the inactive door with the same

bolt through door design incorporated by the Arm-A-Dor. In the double door application, the inactive door must be secured using locking deadbolts. The strike is constructed with 2" x 2" 12 gauge steel tubing.

New Windows® 95 CardAccess® 495 System



Continental Instruments has introduced its newest and most advanced Access Control system to date operating on a Windows 95 platform. This innovative security system offers multi-user operation, user-configurable employee

database, integrated alarm monitoring and relay control, operator activity and response logging, video verification, user customized reports, ID badging, extensive help screens and building management functions.

The CardAccess 495 provides an easy software enhancement to Continental's popular CardAccess 450 utilizing existing hardware panels and readers of any encoding technology.

American Lock® Countertop Display



A new countertop display featuring padlocks for safety lock-out applications is now available from American Lock Company.

The 8-1/2" wide by 13-1/4" high display board is designed to sit on a counter or hang from pegboard, slatwall, drywall, etc. The board comes with one solid aluminum, red padlock that is laser engraved to show American Lock's unique capability to personalize locks. It also comes with one high tech composite Vertron® padlock, with a red anodized aluminum nameplate on the front and back.

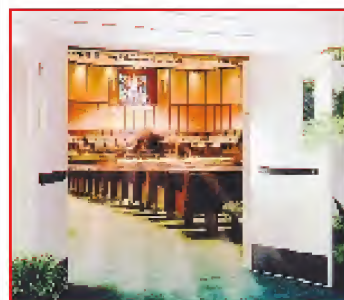
Slydelock® Model SL001-97



Slydelock introduces a new unique device designed and engineered to securely lock your patio doors. Prior to the introduction of Slydelock®, intruders could simply lift a patio door from its track, defeating traditional devices like security bars, pin locks and of course the old favorite, a wooden stick.

Slydelock is made of strong lexan® plastic and reinforced aluminum alloy tubing construction and offers a lifetime guarantee.

The RITE Door by Adam's Rite



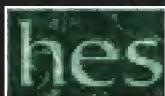
Adams Rite Manufacturing Co., has introduced its complete door system, The RITE Door. The RITE Door provides a high-performance door and hardware that combines style, accessibility and durability into a single package suitable for the highest traffic and most difficult locations. The system includes the door and frame, an integral exit device, hinges, a variety of door finishes, trim and electrification options.

TRL



**ASP - Your Auto Service
Center for the World**

[Click here for more information](#)



Copy the article starting on the next page... and hand it out to your customers!

Three years ago *The National Locksmith* printed a Torture Test article that drew a lot of attention and comment from our readers. We took a door and frame, installed "El Cheapo" brand hardware store locks, and then we tortured this door and the hardware. Naturally, the frame and hardware were almost instantly trashed, broken, folded, spindled and mutilated. This test dramatically showed how garbage locks perform under real life burglary conditions.

Then as our second Torture Test, we fixed the door frame, and installed locksmith grade locks and proper door reinforcement hardware. Not only could we not kick in this door as hard as we huffed and puffed, but the frame and locks withstood incredible force.

Here at *The National Locksmith*, we believe strongly in giving you, our reader, as much help as possible in showing the consumer what

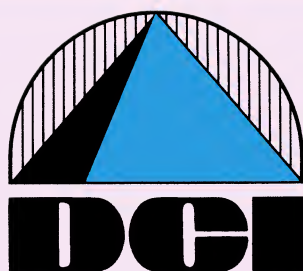
distinguishes the locksmith from the hardware store. The difference is knowledge, training, and product quality.

In this issue, we have adapted the article printed earlier and changed it from an article aimed at locksmiths, to one written for the consumer. We've done that to help you with your marketing efforts. Simply photo copy the article that appears in the following pages, and distribute it to your customers.

Whenever a consumer asks why they need reinforcement hardware and locks that cost more from you than from Home Depot, just give them the following article to read. We think *The National Locksmith* will be helping you to sell more hardware and to educate the consumer.

No need to thank us. Just renew your subscription...or we may visit you...with our forklift!

The Torture Test article
begins on the next page.



***We have it all.
Quality, Value,
& Service.***

[Click here for more information](#)

**COVER
STORY!**

**I'll HUFF
& I'll PUFF
& I'll**

KNOCK YOUR DOOR IN!

by Dale Libby, CML



1. The Stars of the test: The Schlage B600 series deadbolt, the MAG 747 Heavy Duty Strike, and the Don-J o door plate.

2. Faultless lock and door knob on test door.





3. The first assault was a hammer attack on the Faultless deadbolt.

The National Locksmith Testing Lab, recently did a series of comprehensive examinations on deadbolts and door knobs that not only proved informative, but also fun.

First, the stars of this article consist of the hardware used on the door that weathered our violent attacks. The surviving hardware consisted of the following:

1. The new Schlage B660P series of deadbolts that have a beefier bolt assembly and stronger holding screws than that of the standard 400 and 100 series.

2. A MAG High Security Box Strike (Which states on the box that it will stop kick-ins - it does - and should be used with all deadbolts).

3. A Don-Jo classic wrap around door reinforcer that fits on the door under the deadbolt and door knob to stop the door from splitting - it does, too.

These three items can be seen in *Photograph 1*. And while they appear a little abused, they did work. So well, in fact, that despite the assault the deadbolt still operated.

The doors and framing construction used for the test were standard for residential applications. The rough frame was built to standard residential construction, except the header, which played little part in a security installation, using building grade 2x4. The doors were standard residential steel clad doors with wood rails or edges.

On the first door I installed a "Faultless" deadbolt and door knob purchased from a local Builder's Square store. In the package the \$12 deadbolt was nicely displayed and it certainly looked good, at least to the uninformed public.

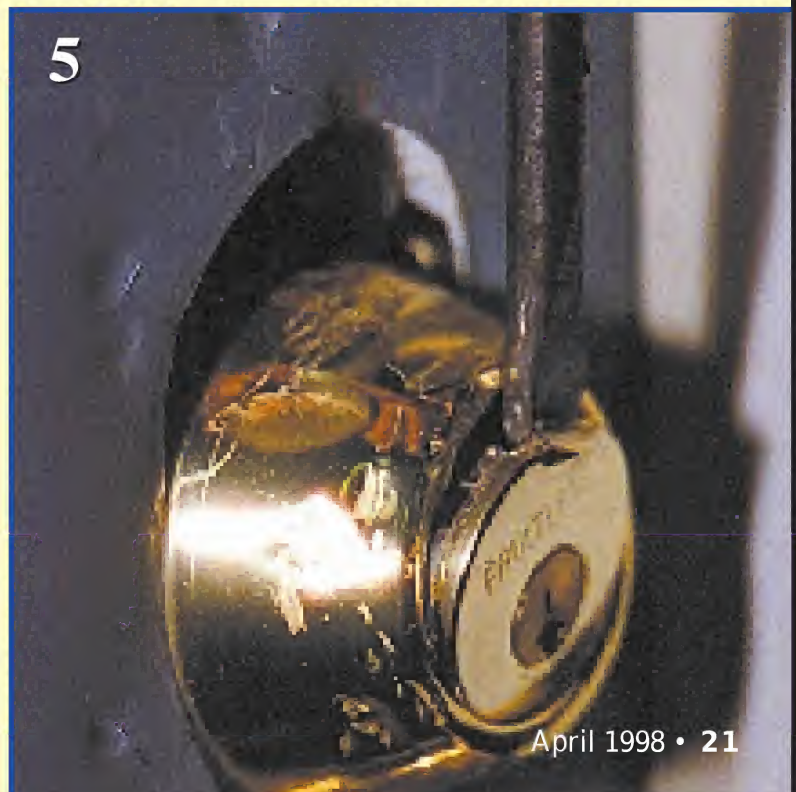
Photograph 2, shows the installed Faultless door knob and deadbolt. The good looks are only skin deep. The tools used in the torture test was limited to those any homeowner or burglar would have around. After only a couple of hits with the hammer, the deadbolt was moved downward exposing the inner workings (see *Photograph 3*.)

At this point, the deadbolt is actually circumvented and compromised. This took about five seconds and two blows of the hammer. *Photograph 4*, shows our thug sticking a screwdriver into the hole to pull the bolt back.



4. A couple of quick blows provided an opening large enough to reach in and to open the deadbolt.

5. Next came a simple screw driver attack. The lock was easily ripped off the door.



Despite being able to open the door rather easily and quickly, we went a little further. *Photograph 5*, shows what happened after using the screwdriver and hammer to beat on the deadbolt a little longer. Still, it was decided not to open the door in this manner. Instead, I selected brute force, I got to kick the door open (I have always wanted to do this).

Backing up a little, I leaned back and gently kicked the locked door. It literally sprung open. The strike went flying as my size 13-1/2 shoe lightly touched the deadbolt. The deadbolt strike screws functioned to help split the door frame, and that was all (*see Photograph 6*).

Now we proceed on to the real test, the reinforced door and strike plate.

The old battered door was removed and a new one rehung. After truing the door with shim stock, it was drilled and the guard plate was installed on the door. The reinforcement plate was also installed in the jamb.

Photograph 7, shows the Schlage B 600 series deadbolt being installed on the door. *Photograph 8*, shows the MAG 747 strike installed with two cover screws and two strike screws located on the inside of the box itself. All four screws are 2" in length giving excellent penetration of the jamb and frame (*see Photograph 9*).

The Don-Jo wrap around plate was then installed along with the deadbolt and a doorknob. For the next test we locked and attacked the door knob. As expected, the knob was circumvented with a pipe wrench in about eight seconds (*see Photograph 10*). After twisting the doorknob open with the wrench, it was hammered off. This was adding insult to injury. Nothing was really accomplished, except to prove the non-protective feature of the average door knob during a force attack.

6. The kick-in - Easy! And the door remnants - good fire wood.



7. Professional locksmith installing Schlage deadbolt.

The real test followed. The deadbolt was beat for about two minutes with the claw hammer. The results? Despite the marring and a few indentations, there is no circumvention here as before (*see Photograph 11*). This deadbolt is designed with a bolt cover or guard and is seated into the face bore hole, preventing the lock from being knocked out of place. Even if a small opening was made, the bolt cover does not allow access to the bolt.

The Don-Jo wrap around plate added further protection by not allowing the hammer to pierce the sheet metal of the door, allowing the lock to loosen or be exposed. The Don-Jo wrap around and the Schlage B 600 withstood the first in a series of assaults.

Not succeeding at knocking the lock off the door, it was then attacked with a screwdriver and hammer. This attack resulted in an unsuccessful attempt to punch the lock cylinder through the back of the lock resulted (*see Photograph 12.*)

Photograph 13, shows an attack with a pry bar. This had no effect on the security of the door, except to bend, mar, and





8. MAG's 747 heavy duty strike.

9. The four screws from this unit effectively anchor the strike box firmly to the rough frame behind the jamb.



10. Using a wrench on the door knob posed little challenge.

11. Battered but not defeated. Even after repeated hammer blows there is no defeat.





12. Trying to knock the cylinder out the back of the lock didn't work either.

13. Pry Bar attack - No Good.



disfigure the installation. It was now time to again, kick the door in.

The first kick was at the same force as that used earlier on the non-reinforced door with the Faultless deadbolt and knob. Despite a level 4 reading on the Richter Kick Scale, nothing happened.

The kick force was increased to a level 7. While the door didn't move, a couple of the supports for the door broke free. Nothing like having the house come down around the door!

After replacing the door supports, the door was given one last gigantic, all-out effort kick, (level 9). Still, NO results. Not wanting to miss out on any of the self-abuse, several others in the testing lab added their own kicks, but none were so great as a 300 pound locksmith/ safecracker could give.

One torture tester backed up 20 feet and rushed the door yelling, "I have steel toed boots on." He jumped up and kicked the door with a Karate kick that would have crushed most any door. Nothing happened.

Then he turned around and backed up 30 feet. He concentrated, focused, and like a professional athlete he approached the door at warp speed, jumped, and gave that deadbolt a double diabolical Shudo-Kahn death kick. Again, the door withstood the competent attack that a lesser prepared door would have easily acquiesced to (see Photograph 14).

Unsuccessful, a strange smile crossed this torture testers frustrated face, slightly reminiscent of the Grinch before he burgled Who Village. Vaulting to a nearby YALE forklift, he stated that it was time for the door to DIE.

Not wanting to crush the wall of the Testing Lab, he decided not to ram the door, and instead placed the forklift blades up against the door, putting gradual pressure against our reinforced locking system (see Photograph 15).

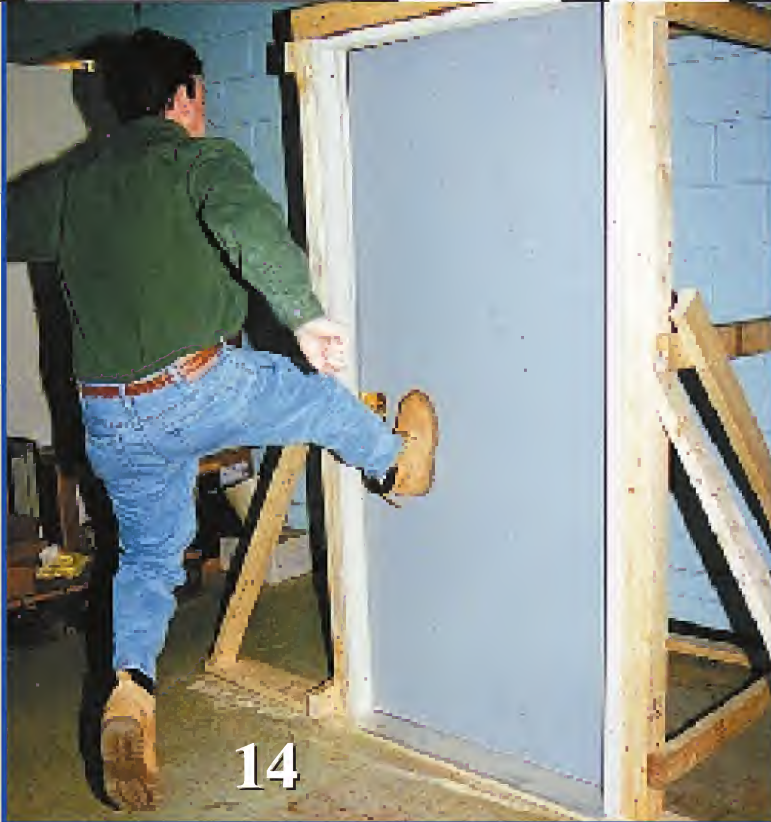
Once touching the door, he stepped on the gas. The wheels started turning, but the door and its hardware held. After increasing the speed, the door still did not open (see Photograph 16). At maximum speed the wheels burned through the floor tile and into the cement. Suddenly, and finally, the door crashed open.

The result! The strike plate split, the frame was slightly cracked and, except for two large dents from the forklift blades, the door remained unscathed (see Photograph 17). An incredible display of what some rather inexpensive additions to a deadbolt installation can do.

After viewing the damage, it was evident that the eventual strike box failure was due to the extensive twisting and bowing of both the door jamb and the framework. In a home, drywall and other wall components may make for an even more rigid framework, better supporting the strike, and making the entry even harder!

So, while the forklift assault has not yet been added to the UL Standards Test, The National Locksmith Test Lab and demolition crew has provided you iron clad proof that you are safer when using the right equipment. These products really do work!

The products used in this test are just a sampling of available products that can greatly increase door security. For more information consult with a professional locksmith in your area. **TNL**



14

14. The kicking attack after reinforcement of the door.

15. Man the battering rams and full speed ahead!



16

16. With wheels spinning, the door and its hardware withheld the forklift assault (not considered a UL standard).

17. To think it took a forklift at full speed to open this door.



15



17

MAG

Designer

Security Products



by
Sal Dulcamaro, CML



1. MAG makes a few more attractive variations of its door reinforcer designs. The different shape variations are part of MAG's "Designer Series."

When many people think of security, they envision big ugly iron gates that make a house look more like a prison. In many cases, there are not a lot of options beyond some overpowering and unattractive security hardware. For certain applications, however; there are hardware alternatives that would be considered attractive and maybe even stylish.

MAG is probably best known for their rectangular shaped door reinforcing plates. The sheet metal plates wrap around the door on the opening side, fitting neatly around the inside and outside lock body and the latch bolt in between. The primary purpose of the reinforcer plate is to hold the door together to resist splitting during a kick-in or similar attack on the door. It is an extremely effective device. Although the rectangular shaped plates are not necessarily unattractive, MAG also makes a few more attractive variations to the design. Two different shape variations are part of MAG's "Designer Series."

Photograph 1, shows one style. The reinforcer installed on the lock mount in the center is for a 1-3/4 inch thick door with a 2-3/8 inch backset. The package to the right holds one for the same door thickness but a 2 3/4 inch backset. The one to the left is for a thinner 1-3/8 inch thick door and a 2-3/8 inch backset. All are polished brass. This style of reinforcer more closely follows the outline of the mounted lock, and it conceals less of the door surface.

The oversized shape of the traditional rectangular plate is more likely to cover damage on a door that has been previously damaged from a break-in or a careless installation. This more attractive design will be less likely to cover scarring on the surface of the door (regardless of the origin of damage). Except for such circumstances, this type of reinforcer should install easily for almost any door. Those same three variations (in door thickness and backset) are also available in antique brass.

The other shape in the Designer Series is shown in Photograph 2. In a polished brass finish, these three are more



2. This door reinforcer design might be more useful and effective in situations where a knob and deadbolt are mounted closely together.

compact although basically curved in shape. This design might be more useful and effective in situations where a knob and deadbolt are mounted closely together. An antique brass versions of this design is also available.

Most lock hardware comes in some kind of metallic finish. I've seen a number of houses where the patio doors and window frames were white with matching white hardware. MAG makes a line of door and window hardware products that come in a white finish. It gives your customers another option when they are very conscious of appearance and matching colors, but at the same time they are very conscious of making their home more secure. You don't necessarily have to use a brass or

chrome finish that might otherwise clash with the general appearance of the surrounding area.

Photograph 3, shows some hardware in the white finish that can be used with sliding patio doors. At the bottom of the picture is an adjustable patio door bar. It can be positioned for full locking or it can be left open slightly in a vented position for hot summer days. The locking bar is also available in aluminum and duranodic finishes. There are also non-vented versions in all three finishes.

At the top of Photograph 3, is a pin style locking device. It can be used for both sliding patio doors and windows. The unit mounts at the base of the door or window track and the pin extends to secure the door or window from



3. MAG makes a line of door and window hardware products that come in a white finish. You don't necessarily have to use a brass or chrome finish that might otherwise clash with the general appearance of the surrounding area.



The
Innovation
You Expect,
with the
Flexibility
You Need!

[Click here for more information](#)



HPC, Inc.
Designing Excellence and
Manufacturing Quality
since 1956

[Click here for more information](#)



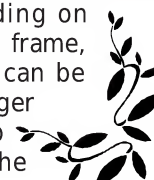
sliding. It is available in the decorative white finish or aluminum.

There are a number of products in the white finish that are designed primarily for windows. Some of them are shown in *Photograph 4*. On the bottom left is a pack of two removable (and effectively portable) window locking devices. There are thumb screws that lock the device to the window track. Since they are removable, they can be moved from window to window as needed. The device in the middle (bottom) is similar except that it has a lever that locks it to the track as opposed to thumb screws. The wood sash clamp lock at the right is designed for double hung windows and is intended for permanent installation. It is attached with screws. At the top center is another permanent installation device. This one is designed for casement windows.

Photograph 5, shows a number of products designed for use with standard entry doors. While they are available in the white finish, most of them are also available in either brass, antique brass or both. The 4 inch slide bolt on the bottom left is designed for surface mounting with a matching white finish strike plate. Because of its construction, it can also be installed on windows, cabinets or some other specialty application.

Second and third from the left (at the bottom) are door chain guards. One of them is keyed and the other one is not. The non-keyed door chain guard is designed for operation from the inside of the door only. The keyed door chain can also be engaged and disengaged from the outside of the door. Using a key from the outside, the gap that the door opens will usually give enough room to slip one's hand in and insert the key for unlocking.

The door guard lock at the far right is a variation in the concept of door chains. It is considered somewhat stronger, and is more resistant to someone trying to push the door open while the person in the home is looking out through the gap of the door opening. Depending on the makeup of the door frame, these types of devices can be reinforced by using longer attaching screws to reach the studs behind the





4. There are a number of products in the white finish that are designed primarily for windows.



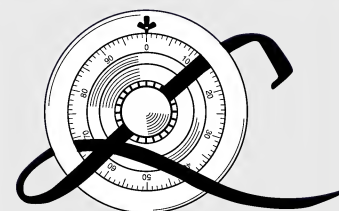
5. A number of products designed for use with standard entry doors. While they are available in the white finish, most of them are also available in either brass, antique brass or both.

surface door framing. The privacy flip lock at the top of the picture works on a different concept and is mounted on the inside surface of the door frame in the gap between the door and frame.

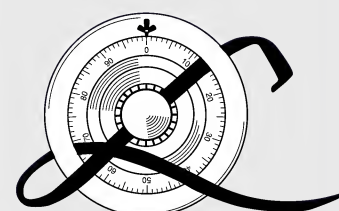
Products like these can help a security professional sell extra security devices to customers who are security conscious, but still prefer

everything to match their decor while also looking attractive.

For information on MAG products call: 800/624-9942, except in California where the number is: 714/891-5100. FAX: 714/892-6845. E-mail: mageng@mindspring.com. You can also visit them on the Internet at: www.magsecurity.com **TM**



Lockmasters
has a
44 year
history of
training
security
professionals.



[Click here for more information](#)

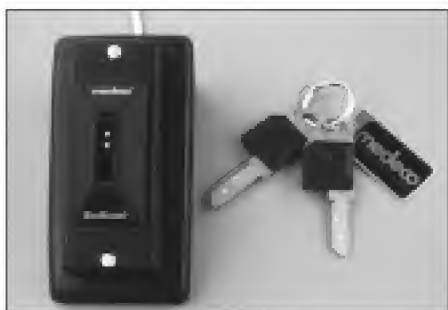
SiteKey/Site Reader

by Medeco

I recently made a trip to Medeco in Salem, Virginia where I previewed their new SiteKey/Site-Reader electronic access control (EAC) credential and reader. If you're interested in developing your own EAC market, you'll have the best of both mechanical and electronic security with SiteKey/SiteReader by Medeco.

Medeco has combined the advantages of absolute mechanical key control (KEYMARK or BiAxial) with the security of electronic access in a highly refined system that has an electronic chip in the head of each Medeco or KeyMark blank that gives you one credential for both systems. This means your customer can now carry one key that will not only operate a mechanical cylinder, but can be read by a reader, leaves an audit trail and is easily programmable with a unique "electronic keyway" that's proprietary to you (see Photograph 1).

With SiteKey there's no need



1. Medeco's Site-Key/Site-Reader electronic access control (EAC) credential and reader.

**Both
mechanical
and
electronic
security in
one neat
package.**

by Jake Jakubowski

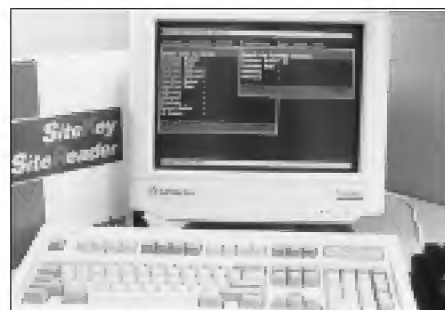
to carry a mechanical key and an additional EAC credential in the form of a card. SiteKey does it all because only SiteKey has both mechanical and electronic capabilities. This unique feature will make SiteKey convenient for the end-user by providing simplified key management with full audit trail capabilities. To further enhance SiteKey's versatility, SiteKey's are available to your customer (but only through your shop) as a mechanical key, a mechanical and electronic key, or as strictly an electronic key.

Obviously, the mechanical key (which has an upgradable "dummy" head, no electronic chip) will only operate mechanical cylinders and the properly coded electronic/mechanical key will

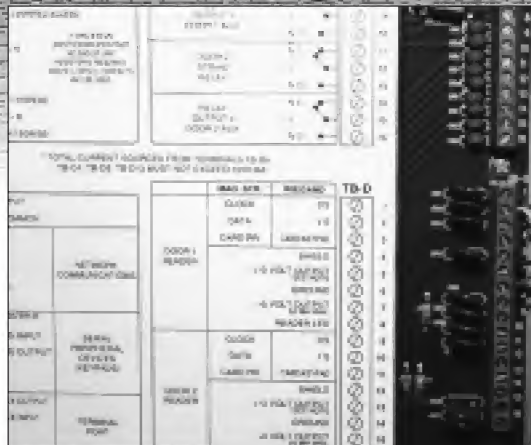
operate both mechanical and electronic. A special electronic key with an unusual dimpled blade (which prevents it from becoming a mechanically correct key) will only open those doors that it has been programmed to access. Consequently, your EAC customer has a broad spectrum of options to choose from when determining which employees have access to what areas. Options that only you, as a SiteKey/SiteReader dealer, can provide.

One of the most attractive aspects of this new product for the existing locksmith dealers is that they can "seed" their market with the upgradable "dummy" blanks for future electronics business. That is, they can install a mechanical KeyMark or BiAxial system and utilize mechanical blanks with a dummy SiteKey head that has the legend "Upgradable to Electronics" embossed on it. This key can create customer interest in the SiteKey/SiteReader program.

Because SiteKey/Site Reader easily integrates into any 26 Bit



2. Only you can duplicate keys and program the key heads.



3. The SiteReader wired to a Wiegand card reader system.

Wiegand based system, there's no new software or programming for your customer to learn. SiteKey operates just like any card-based EAC system. However, only you handle the encoding and cutting of keys for your customer.

The chip inside the SiteKey head ensures that no one can duplicate its electronic signature; and the hardened steel blade will not wear out, chip, warp or crack like cards do. Since the Medeco or KeyMark blade is restricted and the key's electronic signature is secure, no keys can be duplicated without your customer's authorization. They can access with a single credential that you supply exclusively!

Since only you can duplicate keys and program the key heads (see Photograph 2), you can offer your EAC customer a security system that has something that



few, if any, electronic or mechanical systems are capable of offering: single source accountability. Now, even Wiegand technology can truly offer an increased level of security utilizing the "Electronic Keyway" theory.

Installation

Photograph 3, shows the SiteReader wired to a Wiegand card reader system. The SiteReader wiring is conventional to any 26 bit Wiegand system,

however, you do need Medeco's MTA Tool to attach a female head to the wires as shown (see Photograph 4). Next, check the wiring on the existing CPU board and secure the SiteReader to the junction box as seen in Photograph 5. Power the system up and insert the key to check for proper operation. That's it!



4. You do need Medeco's MTA Tool to attach a female head to the wires.

Major
MANUFACTURING, INC.

Installation
Tools

The
Professionals
Choice

Major
MANUFACTURING, INC.

[Click here for more information](#)

medeco®

HIGH SECURITY LOCKS

***The market leader
in locking systems
for security, safety,
and control.***

[Click here for more information](#)



5. The SiteReader installed and secured to the junction box.

Key Programming

The first thing you have to do is attach the electronic head to a mechanically correct key (see *Photograph 6*). *Photograph 7*, shows the riveting block and key components which need to be assembled. Once assembled you are ready to program the key.

The Key Encoding unit which is part of your SiteKey/Site Reader start-up package (which includes the necessary software, etc.) Follow a few easily understood prompts and menu items (see *Photograph 8*) and you will have encoded a key that will



6. attach the electronic head to a mechanically correct key.



7. The riveting block and key components which need to be assembled.

access your new SiteKey/SiteReader installation.

At this point you may be wondering what makes your SiteKey system unique enough to keep another SiteKey dealer from infringing on your newest EAC installation. First, of course, is Medeco's policy of willingly and stringently enforcing the unauthorized duplication of any of their restricted keyways. However, with SiteKey, when you receive the encoding software package, it will consist of the encoding unit, a SiteKey diskette and two locksmith authorization keys (LAKs). The software and LAKs carry your own unique electronic keyway which has been programmed at Medeco.

When you set up a new system, you can insert any key programmed with your individual electronic keyway into the newly installed SiteReader. That first SiteKey inserted in the SiteReader will "burn" your unique keyway into the SiteReader. Once that happens, that SiteReader will not recognize any SiteKey credential unless it was encoded with your individual encoding software.

Just as your personally coined mechanical Medeco or KeyMark key protects you and your customer from unauthorized duplication, your electronic keyway is also, in effect, personally "coined." Subsequently, when a customer's key is inserted into a SiteReader, your keyway code — along with a standard three digit site code required by



8. Follow a few easily understood prompts and menu to encoded a key.

26 bit Wiegand systems — is transferred to the reader and authorizes the reader to accept the credential that is being presented.

Since no other locksmith can cut or provide a matching electronic keyway, you, your customer and the system remain secure. To carry that security even further, Medeco requires that all SiteKey blanks be custom stamped with your shop name or a blind code. SiteKey blanks will accommodate up to thirty-seven characters for company name, phone number or address.

With SiteKey/Site Reader you can offer more flexibility, reliability and security then you can with any mechanical masterkey system or EAC by itself. Yet you can offer your customer more door security then ever before possible.

In my opinion, the remarkable aspect of SiteKey is its market potential. There are already thousands of Wiegand card reader, swipe and prox reader systems in place. Simply by changing the reader, you can convert these systems to SiteKey access control systems. As a bonus, you just might have the opportunity to upgrade that customer's mechanical locks at the same time.

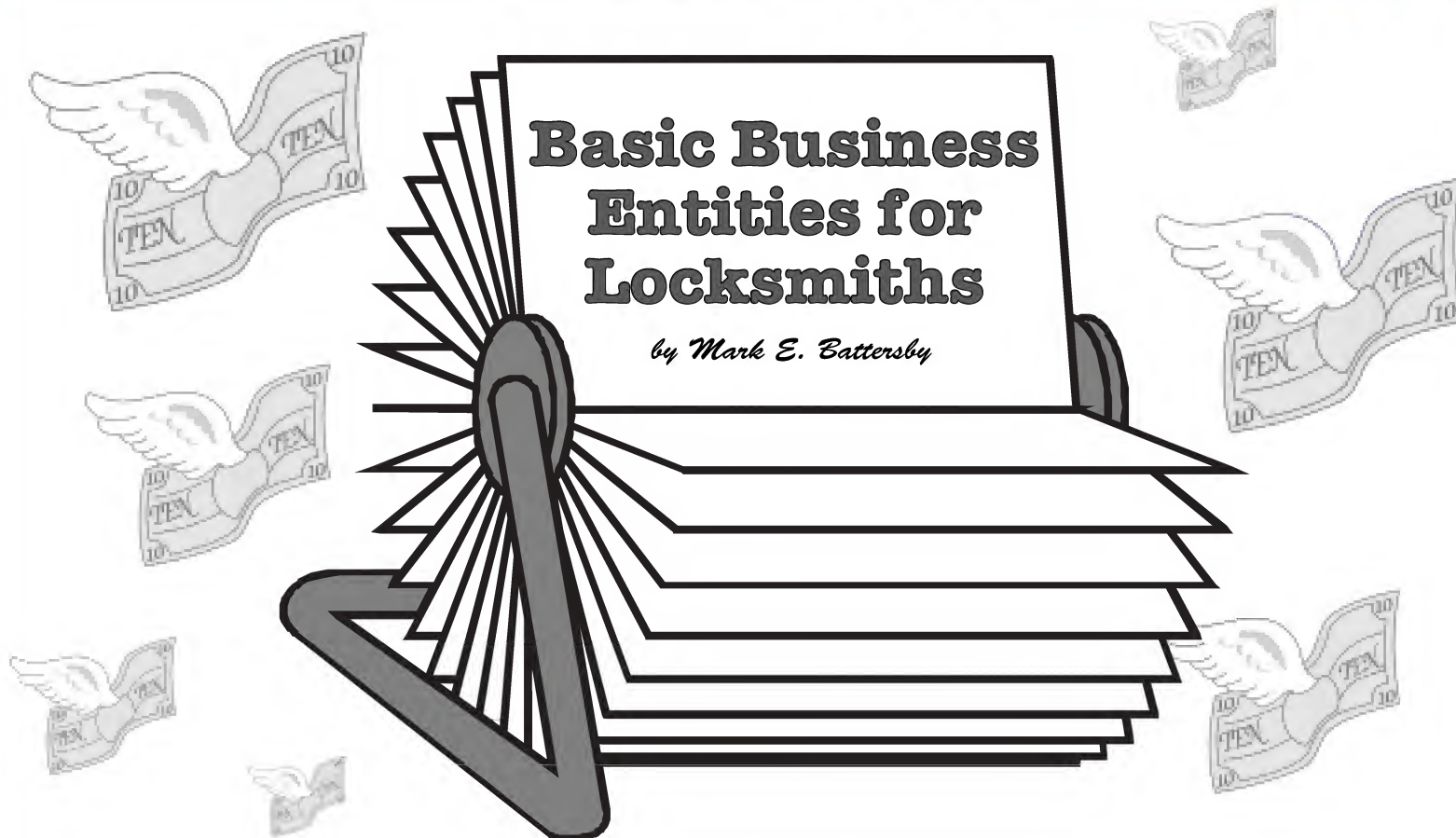
Why don't you give Medeco a call (1-800-839-3157) and find out how little it will cost you to start making big bucks with SiteKey/SiteReader. Tell 'em: "Jake told me to call." After all, where else can you find a key that can read, write, do arithmetic and... make you money?

TRL

NATIONAL
AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

www.laserkey.com



How should you operate your locksmithing activity or business? The easy answer is as a sole owner (sole proprietor) because it is the easiest method and requires the least amount of paperwork. Unfortunately, with a sole proprietorship, you must go it alone, unable to bring anyone into the business. Thus, one advantage of a partnership. However, both the sole proprietorship and the partnership form of operating your locksmith or security business leaves you and any partners liable. Liability, in its many forms, is a strong argument for doing business as a corporation.

With a corporation, however, there is a great deal of paperwork and, in some cases, double taxation of profits paid by the incorporated locksmithing business in the form of dividends. An S corporation, eliminates the problem of double taxation by treating the corporation much in the same manner as a partnership, passing along profit and loss to the shareholders.

What manner is the best for operating your locksmithing business? Let's take a closer look at all the options available to you and your locksmithing business.

Sole Proprietorship

A sole proprietorship is nothing more than a business or financial venture that is carried on by a single person. Often the only formality is notifying the state government that the locksmith will be using a fictitious name for the lock or security business.

A sole proprietor (sole owner) has unlimited liability. After all, the sole proprietor is the same as the business. Should the sole proprietor die, the business ceases to exist. Schedule C of Form 1040 is used to report income and expenses of a sole proprietorship.

Partnerships

A partnership is an organization of two or more persons who pool some or all of their money, abilities and skill in a business and divide profit or loss in predetermined proportions. Partnership shares can be based on capital contributions, time devoted to the business or some other mutually agreeable formula.

Partners are individually responsible for debts of the partnership which is why S corporations are often favored. An S corporation, as you will see, is a corporation that is treated, at least for tax purposes, as a partnership.

In other words, a partnership does not pay Federal income taxes, rather income or loss "flows through" to the partners who are taxed on their individual shares of partnership taxable income. Of course, the partnership is a tax reporting entity that must file an annual partnership return.

Corporations

The courts have historically upheld the principle that a corporation is separate from its shareholders, officers and directors. Shareholders risk their capital investment, but their personal assets are generally considered beyond the reach of business related creditors and lawsuits. Provided the incorporated locksmithing operation was sufficiently capitalized and treated as a separate entity, personal assets are usually shielded from attacks on the corporation.

Corporate ownership offers a number of advantages including a limited financial risk for the owners, increased availability of capital and easy transferability of ownership. Dissolution of the locksmithing business is among the strongest arguments for incorporating.

The owner's ability to more readily value and sell his or her share

in the incorporated locksmithing business at any time is invaluable. It is one means of assuring that the locksmithing business or operation will go on, even if one or more of the principals leave.

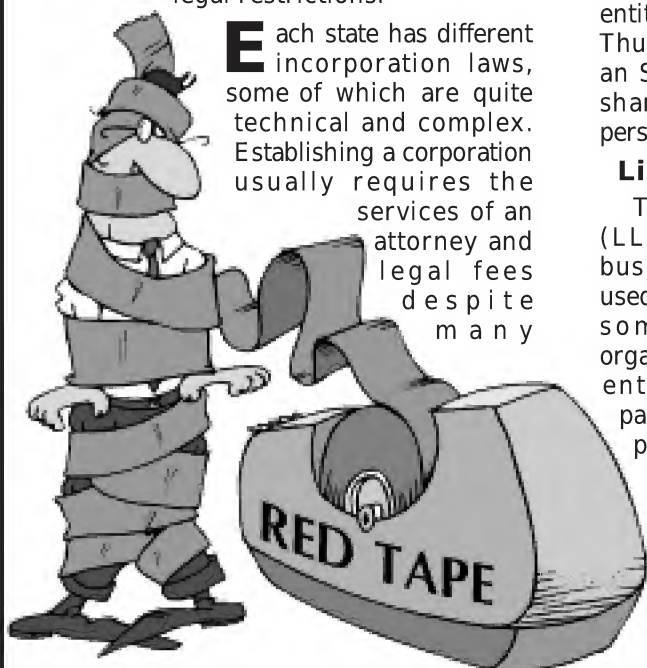
Incorporating the locksmithing or physical security business usually protects your individual assets from lawsuits should you run into financial problems. However, even when your business is incorporated, pockets of personal liability are still present. Even as an employee, officer and director of the incorporated locksmithing operation, when you sign a loan individually, or guarantee anything personally you are putting your personal assets at risk.

Taxes can be both an advantage and a disadvantage for an incorporated locksmithing business. Depending on a number of factors, the use of a corporation can increase or decrease the actual income tax paid. However corporations are able to offer a much greater variety of fringe benefit programs to employees and officers than any other type of business entity.

The Downside of Corporations

Some disadvantages of an incorporated locksmithing operation are also inherent in corporate ownership. Corporations are the most difficult and costly ownership form to establish, they are usually at a tax disadvantage and they often face a multitude of legal restrictions.

Each state has different incorporation laws, some of which are quite technical and complex. Establishing a corporation usually requires the services of an attorney and legal fees despite many



advertisements for do-it-yourself, any-state incorporation.

States also charge incorporation fees that add to the cost of setting up this type of business entity. Delaware, however, has traditionally attracted corporations because it has relatively easy requirements and low costs for incorporating.

As separate legal entities, corporations are subject to Federal and state income taxes. Corporate earnings and any dividends (payments to shareholders from earnings) are taxed on an individual basis.

From the viewpoint of stockholders who receive dividends, this is effectively double taxation of corporate earnings - once at the corporate level and then again at the shareholder level when those already taxed earnings are distributed as dividends.

S Corporations

Many states provide tax relief to corporations meeting certain size and stock ownership requirements by recognizing them as Subchapter S corporations. These 'S' corporations can choose to be taxed as partnerships while maintaining the advantages of incorporation.

The S corporation retains all of the advantages and disadvantages of the traditional corporation except in the area of taxes. For tax purposes, the S corporation shareholders are treated similarly to partners in a partnership. The income, losses and deductions generated by an S corporation are "passed through" the corporate entity to the individual shareholders. Thus, there is no "double" taxation of an S-type corporation. In addition, shareholders of S corporations can personally deduct any corporate losses.

Limited Liability Companies

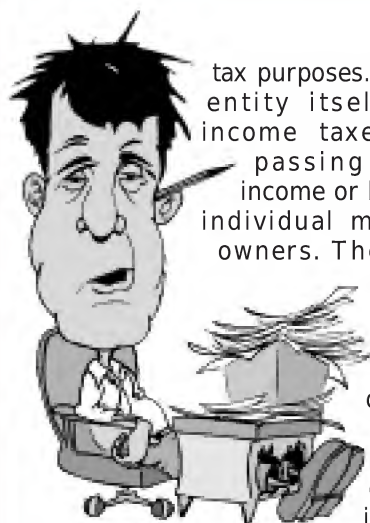
The Limited Liability Company (LLC) is a relatively new form of business organization that may be used in some states (and accepted by some professional licensing organizations). Although the business entity is usually treated as a partnership for Federal income tax purposes, the LLC entity provides that allimportant limited liability protection for the owners at the state level.

A properly structured LLC is, like an S corporation, taxed as a partnership for Federal income



Make Sargent
& Greenleaf's
Comptronic
locks your
choice for
electronic
safe locking
solutions.

[Click here for more information](#)



tax purposes. That is, the entity itself pays no income taxes, instead passing along all income or losses to the individual members or owners. They, in turn, report - and are taxed on - those amounts on their individual, partnership or business income tax

returns. But, LLC members (read shareholders or partners), like corporate shareholders, can not be held personally liable for the debt or liabilities of the locksmithing business that is operating as an LLC.

Under our Federal tax rules an LLC is taxable as a partnership only if it lacks two or more of the following corporate characteristics: (1) limited liability; (2) continuity of life; (3) free transferability of interests; and (4) centralized management. The majority of LLCs which qualify for classification as partnerships for Federal income tax

purposes usually lack the corporate characteristics of continuity of life and free transferability of interests.

In other words, an LLC rarely survives the withdrawal or death of one of its principals (continuity of life) and, since it would usually lose its LLC status when it issues stock, there is little or no transferability of interests.

Why should any locksmith consider the unproven or untested LLC as an entity for his or her business? Common among many locksmithing professionals is a desire for limited liability and the flexibility offered by this hybrid partnership.

The LLC offers both the limited liability normally associated with the corporate form of organization and the flow through, single level of taxation ordinarily associated with the partnership form of business organization. Even better, the LLC also imposes few of the constraints normally associated with S corporation elections.

The Decision

In what form to operate the locksmithing business is a major consideration before and during the time the business operates. Sole proprietorship or partnership may simply be a question of how many people are involved as owners. Whether to incorporate or not incorporate can often hinge on whether adequate insurance is available.

If insurance coverage is available, a locksmith may decide not to incorporate. In those situations where insurance protection is not available or affordable, incorporation and the limited liability it provides might be advisable.



Obviously, the decision of in what form the locksmithing business should be operated depends on many factors, not simply taxes. Liability, the number of people involved, the availability of insurance and, of course, the most beneficial types of financing that will help the locksmithing operation grow. All play a role in the decision of how to operate your locksmithing business. **TNL**



SCHWAB CORP.

Fire protection for your vital records.

**It's not safe
unless it's
Schwab Safe.**

[Click here for more information](#)



*A Monthly Review of
Technical Manuals*

PRO-LOK® '98 Professional Auto Opening Update



Complete vehicle opening information is conveniently laid out on one single page per vehicle. Each page includes full color photos and written instructions detailing each actual opening procedure. Each page is a complete lesson for a particular vehicle showing a photo of the vehicle for identification purposes, a photo of the recommended tool placement, and a photo or graphic showing exactly where and how the tool is being used to open the vehicle. Also included on each page are: Picking Direction, Linkage Type, Tool Part Number, Tool Illustration, Alternate Methods, Keying Information, Code Locations, Code Series Information, Code Card Number, Replacement Lock Part Numbers, Key Blank Numbers and Particulars, Wedge & Light Placement and more. Airbag information is listed when applicable.

Since the PRO-LOK Car Opening Manual System is actually a series of yearly updates, you don't have to

reinvest each year and purchase an entire new manual. You simply purchase one yearly update at a very reasonable price, and collate it into your existing system. The System picks up each year where we left off the previous year. This means that the Toyota section of the 1998 update will begin with page 63 because the last page in 1997 was 62. This updateable system allows the most flexibility in collating your manuals. For those customers just starting on the System or equipping an additional vehicle, you can purchase the Car Opening System in Complete Volumes rather than individual yearly updates.

The price for the PRO-LOK '98 Professional Auto Opening Update is \$35.00.

For more information on PRO-LOK car opening manuals contact:

PRO-LOK, 655 N. Hariton St., Orange, CA 92868-1311.
Phone: (714) 633-0681, Fax: (714) 633-0470.

The Bookmark

PRO-LOK® '98 Professional Auto Opening Update

INFORMATION '98 UPDATE

HOW TO USE OUR PAGE

*We do not intend to replace the car. Following is an explanation of how our auto opening pages work. While following the same basic format initiated in 1988, user friendly refinements have been added through the years.

MANUFACTURER '98 UPDATE	
VEHICLE: MODEL NAME	Vehicle ID Photo
YEAR: SURVEY YEAR	
PICK: PICKING INF*	Tool Placement Photo
LINKAGE: LINKAGE TYPE	Technical Usage Photo
TOOL: TOOL PART #	
Tool Illustration	
OPENING INSTRUCTIONS: 1 Wedge placement. Inspection light use. 2 Tool placement 3 Depth of tool. 4 Tool manipulation instructions.	
YEAR	SPS
Address Information and Location	Address
NOTES: Shows how keys are used CODE LOCATION: Shows which keys. If any, have codes stamped on them CODE SERIES: What the code series numbers are CODE BOOK: What the code series numbers are CODE CARD: Shows which code card is in use LOCKS: Shows information on replacement locks KEY BLANK: Shows how when to blank a key	
Model Name	MANUFACTURER - PAGE NUMBER

* Pick Direction: PAS=Passenger Door, DRV=Driver Door, CW=Clockwise, CCW=Counterclockwise
INFORMATION - PAGE 2

LEXUS

'98 UPDATE

VEHICLE: LX450
 YEAR: 1997
 PICK: HIGH SECURITY
 LINKAGE: HORIZONTAL
 TOOL: AO-47



- 1 Insert a wedge 7" from the rear edge of the front passenger window.
- 2 Feed the short tip of the AO47 into the door cavity at the extreme rear edge of the window. Tip facing forward.
- 3 Lower the AO47 10" into the door cavity and rotate it 180° counterclockwise. Gently probe for the outside pull handle bell crank.
- 4 When the tip of the AO47 contacts the spring-loaded bell crank, manipulate the tip of the AO47 to contact the lower bell crank (1" below the upper bell crank.) Push down to unlock the door.



No 500-301003 System at this time.

NOTES: All Locks Keyed Alike CODE LOCATION: Passenger Door Cylinder CODE SERIES: 01-05000 CODE BOOK: N/A CODE CARD: N/A LOCKS: ASP KEY BLANK: Transponder Key, I/O: LPSPTT	
Door: C-30-103	Back: B-30-135
LEXUS - PAGE 14	
LX450	



by
Michael Hyde

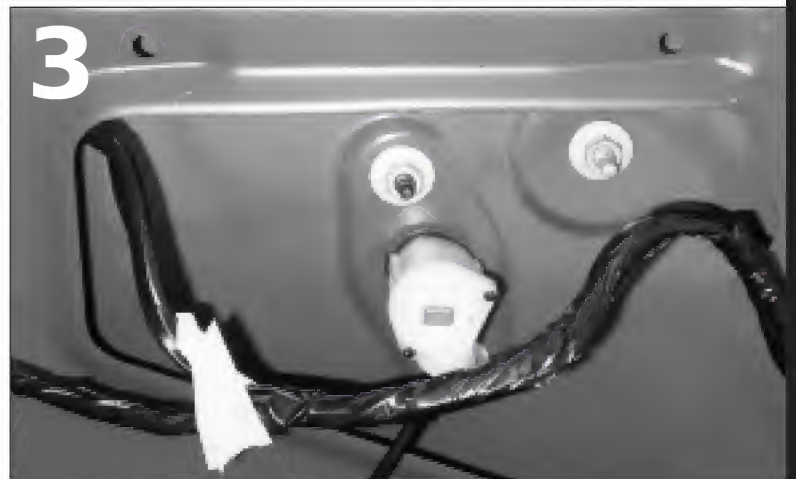
SERVICING THE 1997 BUICK PARK AVENUE PART 2

This month we conclude the '97 Buick Park Avenue feature with the trunk lock and glove box lock.

TRUNK LOCK SERVICING



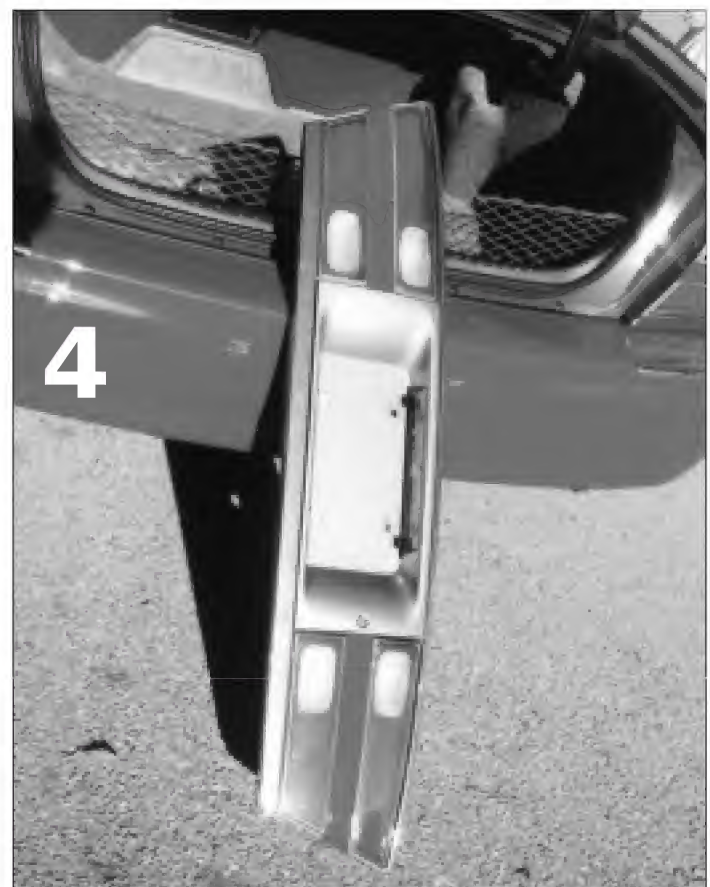
↑ The trunk lock cylinder is located to the right of the license plate.



↑ The trunk lock is bolted to the trunk lid by two 10mm nuts. The cable tailpiece assembly is snapped onto the rear of the lock.



↑ To get to the back of the lock cylinder, you must remove the cloth-like liner that covers the inside of the trunk lid.



↑ You will have to remove the 10mm nuts that hold the rear tail-light assembly on. The tail-light assembly can then be removed.

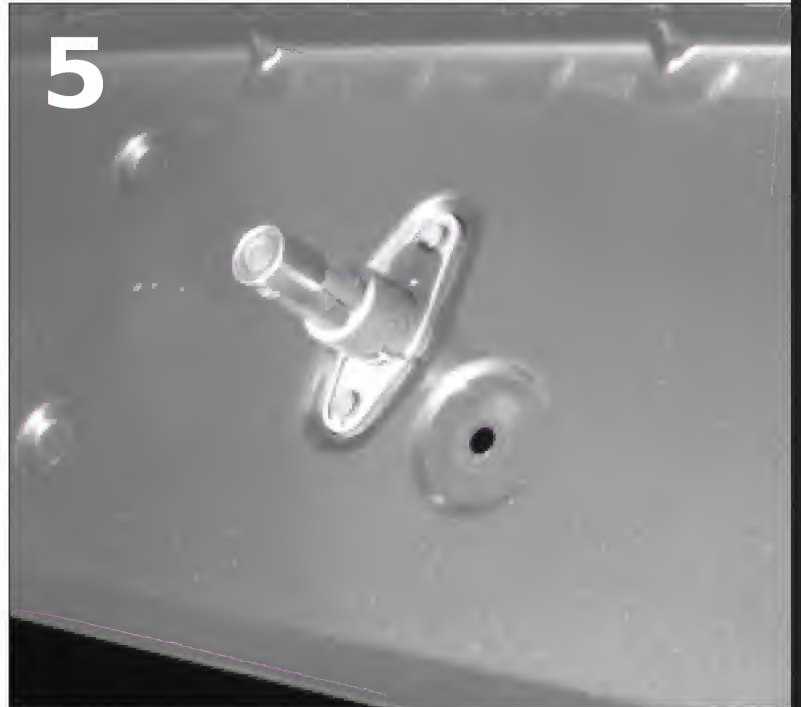
Continued on page 42

SRI
SECURITY
RESOURCES INC.

***SRI and Steve
Young are working
together to bring
you the best in
locksmith tools
and supplies.***

[Click here for more information](#)

Continued from page 40



↑ A view of the trunk lock with the tail-light assembly removed.



↑ A view of the trunk lock removed.



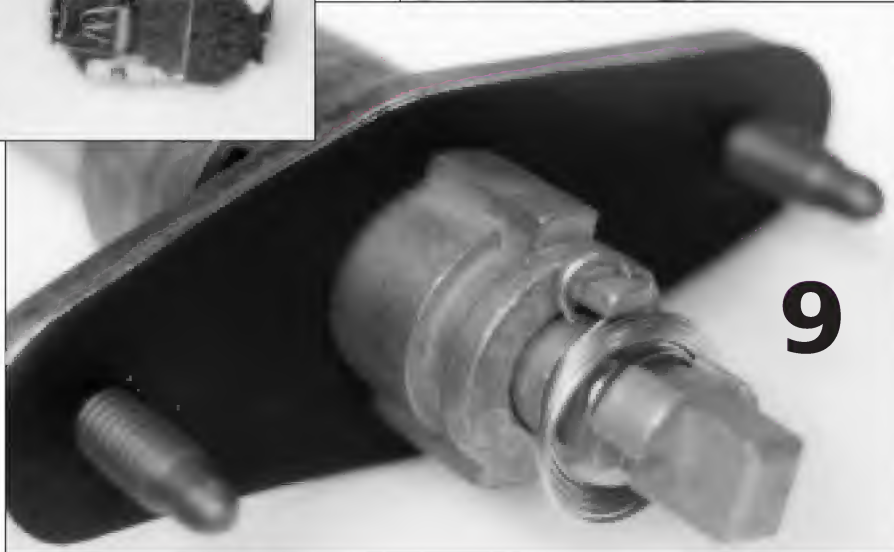
↑ The facecap is re-usable. The facecap needs to be removed to slide the cylinder plug out.



8
↑ The face cap, dust shutter and springs in their disassembled state.



10
↑ The middle section of the lock assembly has a large wire retaining clip.



9
↩ The tailpiece return spring as it is mounted to the tailpiece shaft.



STRATTEC™

***The world's largest producer of
automotive locks and keys.***

[Click here for more information](#)



11

↑ The wire retaining clip removed.



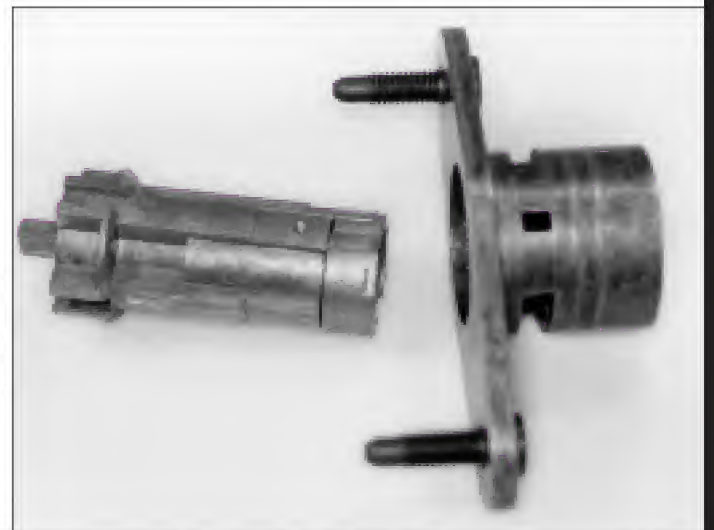
14

↑ The tailpiece shaft is also warded.



12

↑ The rear housing section can now be rotated and removed.



15

↑ The front section can now slide out of the main housing.



13

↑ The rear section of the housing is warded and can only rest flat in the main housing in one position. There is a spring that sits between the front and rear sections.

Continued on page 49

Continued from page 44

16



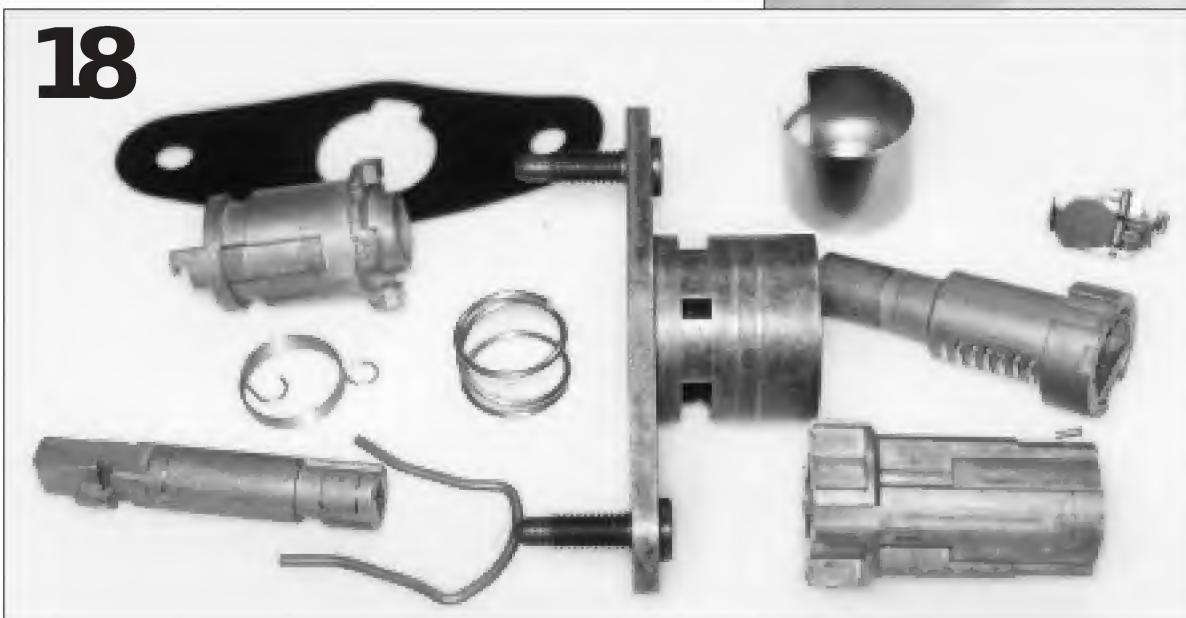
↑ The cylinder plug is also warded and must be rotated to a certain position for removal. A working key is necessary, or you will have to pick the lock. It is possible to use H.E. Mitchell's EZZ-Reader, but since the tumblers are of a different design the reader does not read the tumblers correctly. The reader tool reads the wafers shallow, such as a number four depth reading as a number three depth, and so on.

17



↑ The trunk lock cylinder plug contains tumblers in positions 3 through 9.

18



↑ The trunk lock assembly components disassembled.

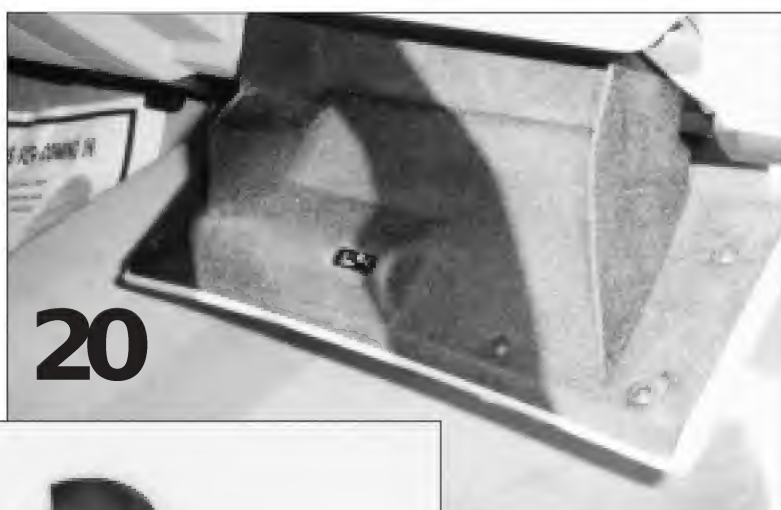
GLOVE BOX / COMPARTMENT LOCK

19



↑ The glove box lock.

20



↑ The inside liner must be removed to get to the locks latch assembly. There are six phillips head screws securing the liner.



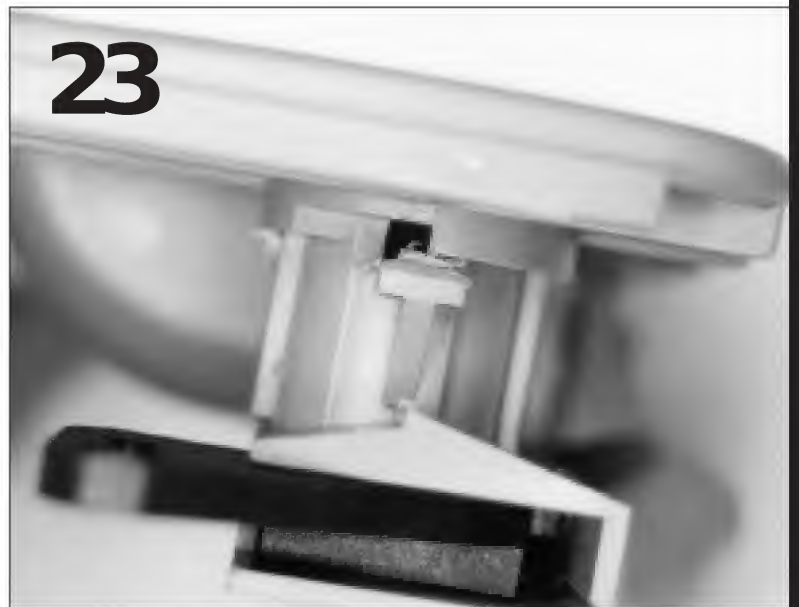
↑ Next, remove the two 8mm nuts that hold the latch on, and disconnect it from the lock unit. You can now remove the large horseshoe clip that holds on the lock unit.



↑ The glove box lock unit removed.

**ASP Covers the World
of Auto Locks**

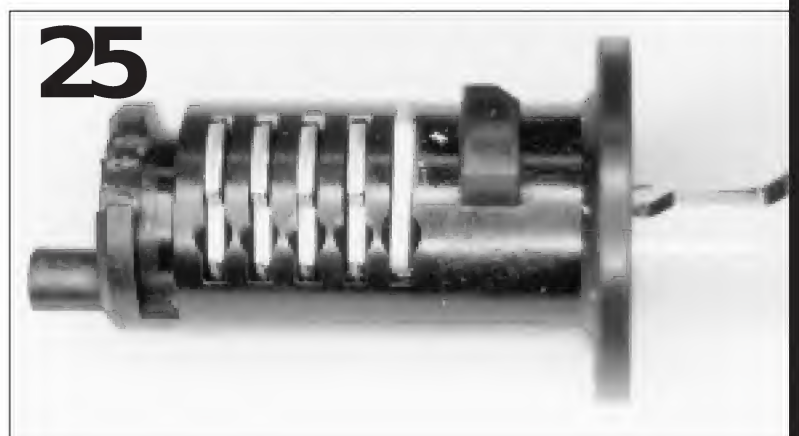
[Click here for more information](#)



↑ Rotate the cylinder plug to the locked position and then depress the wafer in the access window to rotate the cylinder further. It will then line up with the ward on the end of the plug for removal.



↑ A view of the ward on the end of the cylinder plug.



↑ The glove box lock cylinder plug contains four combination tumblers and one retaining tumbler. The combination tumblers are positions 7 through 10.

MAKING FIRST KEY

NOTE: Since the codes for this car are different than other G.M. 10-cut codes, calling Buick Roadside wouldn't do much good until someone release's the codes for this car.

Method 1. Use A-1's GM 10-cut ignition pick and decoder service set. It will allow you to pick the ignition cylinder and then remove the cylinder to decode it, without drilling or damaging the lock. This will give you cuts in positions 1 through 9.

(A-1 Security can be reached at 804-359-9003)

Method 2. Use AABLE'S GM 10-Cut tool to pick the lock to the "ON" position and remove to decode the lock.

(AABLE locksmiths can be reached at 718-847-1377)

Method 3. Remove door or trunk lock and decode the lock. Progression two cuts needed to turn the ignition "ON", in positions 1 & 2. Then progression the last cut in the glove box for position 10.

IMPORTANT NOTE: The cylinder plug only releases when it is in the "Start" position. You can disconnect the battery. If you disconnect the battery you may need a special radio "Code" to reactivate the vehicles radio. You can put the car into gear, such as "Drive," and then turn the ignition to "Start" to depress the retainer. When the car is in gear, the transmission safety switch does not allow the starter to engage. Be Careful, if you hear the starter engage, turn the ignition switch to the "OFF" position immediately.

SPECIFICATIONS

Code Series: 0001 - 2000

Key Blank: Dealer Item Only (at this time)

G.M. Part #2852088 - Master; 2852089 - Valet

HPC 1200CM # CF215

M.A.C.S.: 2

Center of first cut: 1.034 (from tip)

FRAMON: Lay tip stop clip flat against left side of vise, then tip stop key against clip.

Set first cut @ .216

Cut to Cut: .092"

Tumbler Locations

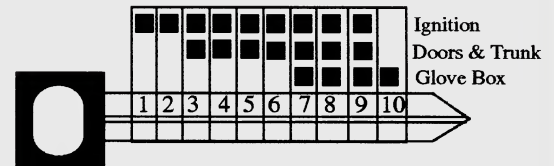
Depths:

1= .315

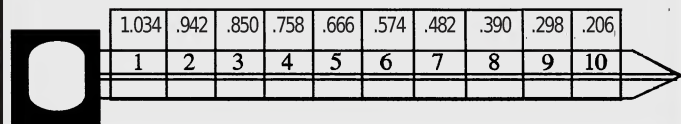
2= .290

3= .265

4= .240



Spaces: Tip to Bow



Don't panic!
We have Security
Exit Devices.

[Click here for more information](#)

TRANSPONDER KEYS



↑ All Buick keys that have a marking of "PK3" are transponder keys.



↑ A view of the tiny transponder and how it is positioned in the head of the key.

TNL



***To be a World Leader You Need Quality Products,
Innovative Technology and Strong Partners.***

[Click here for more information](#)



With Access Control

by J. Jay Vaitkus

Opportunities for increased sales and profits in the Access Control market have increased dramatically. Advancements in technology have contributed to improved product solutions. Locknetics has recently introduced several new products which are ideal for the locksmith installer. Our new Intelligent by Design product line features battery operation, on-board access control circuitry, easy installation, and a design which allows easy installation into existing preps. These new products let you fulfill your customers' desire for customized solutions, while at the same time minimizing the time you must spend installing optional features. This translates to increased profits for the locksmith installer.

Typical Access Control Systems

Typical access control systems consist of four essential components. (1) A power supply: To provide the low voltage required for the system to operate. (2) A locking device: Many choices exist, depending upon the type of door, swing of door, level of security required, ease of installation, and aesthetic appeal. Generally, locking devices fall into the following broad categories: electric strikes, electrically operated bolts, magnetic locks, and latch retraction devices. (3) Wire: Required to connect the system components

together. Stranded copper, multi-conductor, color coded, and without splices is the norm. (4) A control or switch: To activate or deactivate the system.

Switches are worth discussing for a moment. A circuit normally contains several switches. A switch may allow a person to exit, for example, an exit device used to release a magnetic lock. A receptionist may have a push button switch to allow release of an electric lock from a remote location. The fire panel can act as a switch to release the lock in an emergency. All of these components work together so the access control device can allow authorized personnel to enter the secured space. Remember that no matter how complex the access control device (retina reader, hand geometry unit, voice recognition system, proximity, mag stripe card reader, keypad, or TouchEntry™ data key), the locking system really only views the device as a simple switch.

Access Control On-Board

Locknetics continually strives to design products that are easy to install, require minimal wiring, are designed from scratch for electric or electronic operation, and allow for maximum user flexibility. In short, the products are intelligent by design.

Take for example the 109 PowerLock™ Plus magnetic lock that we designed specifically for the

locksmith. Like most magnets, it is surface mounted, which makes it easy to install. But unlike most magnets, the 109 PowerLock™ contains an on-board microprocessor that provides you with numerous features and options, but spares you the difficult wiring normally included with options. Look at these advantages: You simply supply 12 or 24 volts to the lock, either AC or DC, and a special circuit configures the lock to do the rest. Fire alarm release contacts are built-in to the circuitry so special power supply relays are not required. Simply connect your switches, any switches, to the remote release contacts and activation of any switch will release the lock. The circuitry includes a 0 to 120 second programmable relock time delay for user convenience. Has your customer complained about the lack of a magnet's "buzz" to alert them? We've included an audible horn to signal the unlocking of this 109 PowerLock. Ever wish you had an LED indicator to visually display lock status? The 109 incorporates a tri-color LED for that purpose. Did you ever have a request for a door propped open alarm or a door forced open alarm? The 109 with SEC option includes both of these features- built right into the lock with nothing extra to wire.

The PowerLock also includes built in access control circuitry. Simply

plug a Locknetics SelectEntry™ keypad directly into the lock and you have a powerful access control system, capable of allowing up to 500 keypad codes or 500 TouchEntry data keys or combinations of both. You can add, delete, or change users right at the keypad with nothing additional to buy. But, if you desire, Locknetics offers computer software with the ability to control facility access from your portable laptop computer. There is even an audit trail option that will allow you to download a list of events that have occurred at the clock. Who went through the door, what time, what date, when was the door propped open, was power lost to the building, was the door forced open? All of these questions are answered by the audit report if you choose to purchase it.

Stand Alone Systems

Does installation of a complete, hard-wired system create conflicts with your local authority having jurisdiction? Locknetics has solutions which may work to solve your access control requirements while boosting your profits at the same time. We have expanded our line of stand-alone, battery operated access control devices. This year's

offerings include: A new electronic cylindrical lock, new electronic mortise lock, and a new electronic exit device with rim latch or vertical rods.

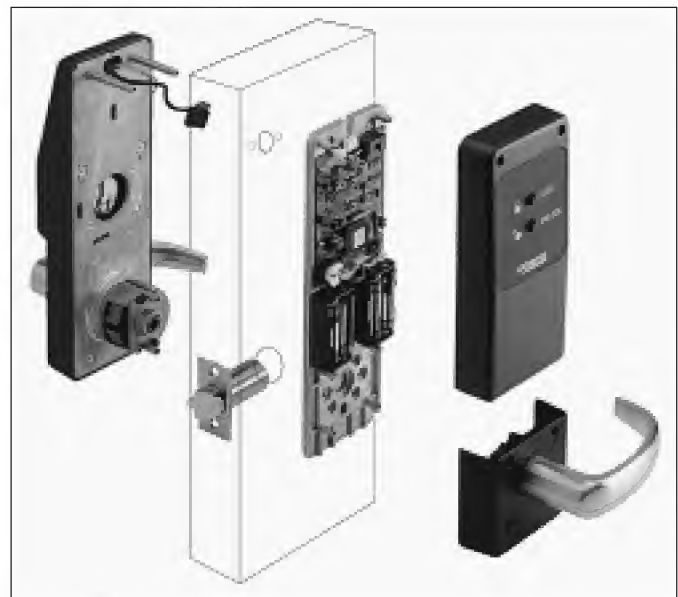
Heavy Duty Mechanics In An Electronic Cylindrical Lock

Mechanically Speaking- The CM 5100 Series (see Photograph 1) includes solid cast lever handles. The outside lever includes a patented Torq-Defender™ clutch assembly. The chassis assembly is made up of only seven cast stainless steel parts. Twenty seconds and an allen wrench is all that is required to reverse the hand of this lockset. Designed to fit into a standard 161 prep, with the anti-rotation bolts inside the 2-1/8" bore, the design of the CM 5100 eliminates common retrofit problems. Emergency key override is by a standard 1-1/4" or 1-1/8" mortise cylinder contained in the

outside trim. Locksmiths can appreciate a cylindrical lock that interfaces with any mortise cylinder.

Heavy Duty Mechanics In An Electronic Mortise Lock

Mechanically Speaking- Like the cylindrical lock, the CM 5500 Series (see Photograph 2) also includes solid cast lever handles. The outside lever includes a patented TorqDefender™

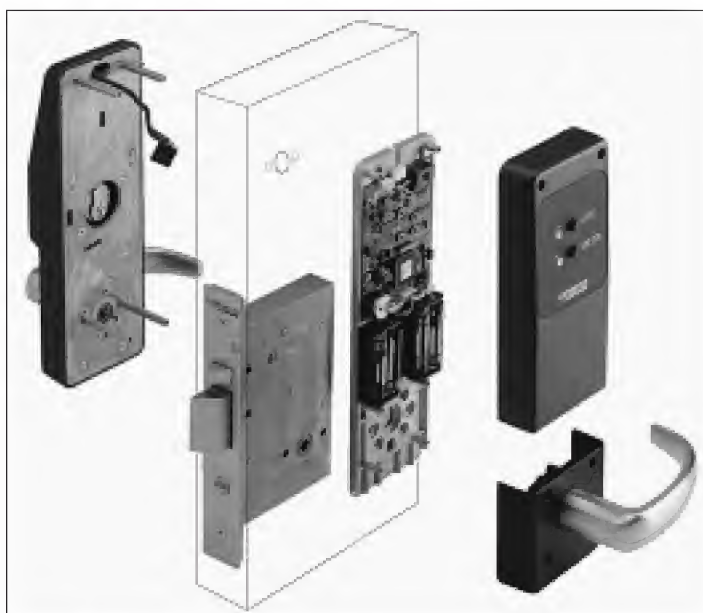


Photograph 1.



**HPC has it all :
Key Machines, Software, Books, Car
Openers, Pick Sets, Tools, Door Guards,
and Key Cabinets**

[Click here for more information](#)



Photograph 2.

clutch assembly. The lock internals consist of only nine cast stainless steel parts. Twenty seconds and an allen wrench is all that is required to reverse the hand of this lockset. Remove the allen screw, pull out and rotate the massive stainless steel latch bolt, and replace the allen screw. Heavy duty lever return springs are captured inside the inner and outer trim assemblies, which simplifies the mortise lock case and makes handling a snap. Simply pull out a 5/16" spindle, rotate the lever 180 degrees and replace the spindle. Emergency key override is by a standard 1 1/4" or 1-1/8" mortise cylinder contained in the outside trim. While designed to fit into a standard ANSI prep, it is unique having a mortise cylinder that does not screw into the lock case. You do not have to match up cylinder holes in your retrofit applications. All CM 5500 models are available with an optional AutoBolt™ automatic deadbolt. This unique design employs a mechanical trigger to extend the latchbolt to a full one 1" when the door is closed.

Heavy Duty Electronic Exit Device

Mechanically Speaking- The 6010 Series electronic (see Photograph 3) is available in rim latch or vertical rod styles. Like our CM 5100 and CM 5500 series it is 100 percent manufactured by Locknetics. It is available in 36", 42", and 48" sizes with an easy field trim design. It is non-handed and uses investment cast stainless parts in the active head. The active trim on the outside includes a solid cast lever handle with the

patented Torq-Defender clutch assembly. When inside the secured space, this device operates much like a standard exit device- it lets everyone exit freely. Unlike most exit bars, however, the 6010 Series has access control circuitry contained inside the bar. The active trim on the outside requires the user to enter the proper keypad code or use a valid Touch Entry data key to gain entrance. This

brings us to the electronics, which are shared between all of these products.

The Electronics

With the mechanical aspects clear, let's look at the electronics. The CM 5100 cylindrical lock, CM 5500 mortise lock, and the 6010 exit device all share the same electronics, which make these products intelligent by design. Here's how it works. Inside the outside trim of the CM 5100, CM 5500, 6010 series is a small, military quality, micro-motor. Our electronics tell the motor when to engage the TorqDefender lever. Once engaged, the lever will retract the latchbolt. When disengaged, the lever will free-wheel. The motor only uses power when in motion, so we could, for example unlock or lock the door all day long and consume no power. The motor is highly efficient and requires only four standard AA batteries to provide over 80,000 uses. This means that 219 people could access an opening secured by the CM 5100, every day of

the year, including Saturday, Sunday, and every holiday, before the lock displayed its low battery indication. You can use keypad codes, a TouchEntry data key, or a combination of both for access control. Programming is accomplished right at the keypad. You can add, delete, or change user codes quickly and easily with no additional programmers to buy. TouchEntry data keys or keypad codes can be programmed with a variety of unique features such as toggle, lock out, one time use, or supervised use. If you're looking for audit trail and computer programming, the LockTrak software program, designed by our locksmith customers, works on your portable computer (see Photograph 4). Best of all, with access control built right into the outside trim, there is no fancy wiring. The circuitry is easily mounted on the secure side of the door, and all the units are weatherized for the toughest applications.



Photograph 4.

In Conclusion

Locknetics has been defining, designing, and manufacturing security products for over a quarter century. Many things have changed since we introduced the industry's first magnetic lock 26 years ago: improved holding force, lower current draw, auto-voltage selection, modular circuit boards, and greater user flexibility. Locknetics has expanded its original product offering to include intelligent magnetic consoles. Our new line of stand-alone battery operated cylindrical locks, mortise locks, and electronic exit devices should provide you powerful access control solutions to meet the needs of your customer, while providing the durability, flexibility, and easy installation you demand.

To see these new products first hand, request our new video from your area representative or call Locknetics at 860-584-9158. **TNL**



Photograph 3.

Mystery Safe



by
Dale W. Libby

Safe openings by professional safemen and women is highly individualized and custom fit to that particular person. In the articles that I write, I tell you how I open and service safes, and then I tell you a better way if I find one. Hindsight is always perfect.

Safe opening is an exercise in conceptual awareness. I try to service safes, even those that I have not worked on before, without going to the books. With the advent of several new and unlisted safes on the market, this has become more a rule than the exception. There is nothing to be afraid of. With the approach of standardization, there is not much new with mechanical combination locks, or is there? We shall see.

Techniques do differ, and so does the time you can spend on any one unit. Since "Time is Money," it makes no sense (cents) to spend a day or two to concentrate on one safe or chest when you have a lot of other work to do. Drilling is a good way to combine time spent with money charged. (Sometimes it backfires though, as we will see).

My *modus operandi* consists of manipulation for about 15 minutes. If I do not have at least 1 number in that time, I will crack out the drill cases and rigs. In some cases the lock is already open in that time frame, and the repair, if there is any, is easy. Also, when manipulating a safe, there is no need to figure out the template handing of the lock. Any lock that will fall to manipulation can be mounted in any direction.

Drilling is mostly standardized by using high quality drill rig templates and precise positioning. One should be aware of the mounting of the lock to determine where one is going to drill. My usual procedure is to drill in a non-critical area of the lock and transfer to the drop-in position. If the safe has stopped working, or if it has been beaten during a burglary, it is best to drill precisely at the drop in position, which is a multipurpose placement where several operations can be accomplished through the same hole.

If one happens to drill a viewing hole about 1" out from the center of any new style Group II lock, one can see the edges of the wheels and the gates. It makes no difference how the lock is handed or where the lever is. With some common sense, you would need to try about 15 combinations before you would have the safe or chest combination lock open. In theory, after determining the combination through your drilled hole, you should be able to figure out how the lock is handed and be able to move the gates to the true drop-in position and oscillate the dial.

In theory, once the relative combination is known, there would be a maximum of 100 possible combinations. Let us try to put some of this concept awareness to good use on some mystery safes.

Photograph 1, shows a very popular configuration of an S&G dial and handle. The center of the dial is on a direct line with the center of the opening handle. One can easily surmise that the lock is mounted Horizontal Left (HL) due to the dial and handle position. There are several opening options available. I normally try manipulation first. If unsuccessful then I drill. The dial on this unit turned so hard, that I was forced to drill. I opted to penetrate at 97 on the dial, about 7/8" from spindle center.

Opening was quick and smooth and there was a medium hardplate that

Continued on page 62



1. A standard old style arrangement with dial and handle on centerline. Obviously a Horizontal Left (HL) mounted lock stopping movement of handle cam.

Continued from page 59



2. Over and under mystery safe. Bottom safe is a TL-30 while the upper safe is a "B" rate. Note handle configuration in conjunction to dial and ring.



3. Close up of lower safe. Lock is mounted VD (I hope)!



**LOCKMASTERS
SECURITY
MANAGEMENT**

TM

[Click here
for more
information](#)

**Providing quality
tools, parts, and
service for
the security
professional.**

required only one Strong Arm (new style) drill bit to penetrate. The safe in question was a Shaw Walker unit with an S&G lock. No real surprises here.

Next, something a bit more esoteric. In *Photograph 2*, is a double safe unit. Both safes were made by the same manufacturer. The top unit was missing the dial. It was sheared off when a grocery store forklift dropped the unit on its face. The bottom unit is either a TL-15 or TL-30 (see *Photograph 3*).

The reason the store needed the safes opened is that they were bolted together. It was impossible to move the unit as a whole into the newly remodeled office. The total height of the safes was higher than the door height. The customer wanted the lower chest opened first, and I obliged. Unfortunately, I made a critical error in judgment that cost me several Strong Arm drill bits and a couple of diamond core bits.

Photograph 4, shows the Strong Arm mini-rig set up to penetrate the safe with a template VD (Vertical Down) position of the combination lock. This was a good guess on my part. Here are some of the thoughts



4. Strong Arm Mini-Rig with diamond core bit.

Major
MANUFACTURING, INC.

**Every Installation
Is a Self-Portrait
Of the Person Who Did It.
Autograph Your Work with Excellence.**

[Click here for more information](#)

that went through my mind before committing to the VD drilling.

The position of the dial is above the handle and to the right. The current configuration of many new safes is to mount the lock in the VU or VD position and have the combination lock bolt block the movement of a primary bolt bar.

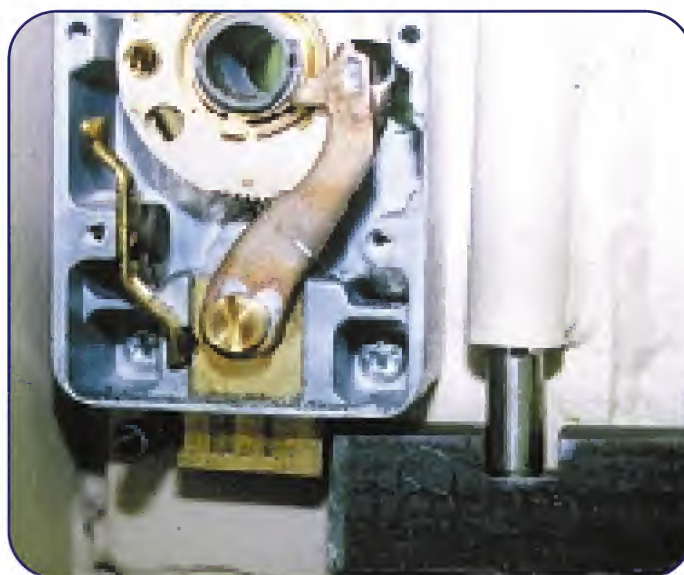
I am of the old school of safe attack. When faced with drilling, I usually opt for under the dial drilling. Repairs are hidden when the new dial and ring are installed. I opted for drilling at 72 for a VD down lock at the drop-in position which allowed me (in theory) to view the lever and gates of the combination lock. The trick was getting through the hardplate.

The real trick would have been to drill anywhere else than the door and avoid the hardplate altogether. I could have chosen either side, or even the back of the unit. If there was not a safe bolted to the top of the unit, I could have drilled there. I should have drilled anywhere except where I did, although I did learn how to use diamond core drills. Expensive lesson

5. Trophy picture, lock mounted vertical down with relocker held in place by auxiliary cover.

for me, for I made the mistake of quoting a flat rate to get the opening. I made up for it on the top safe, however. It was opened and repaired in under one hour. The bottom safe took approximately three hours to open, it had a Maxalloy hardplate, whilst the top unit had a Mickey Mouse hardplate. Win some, lose some.

Photograph 5, shows how both locks were mounted. They are Vertical Down with an additional cover to hold the reloading spring loaded pin in place. To the left of the bolt is a hardened pin that reinforces the bolt when in the locked position. This keeps one from trying to bash the handle and get the unit open. Relocker fits into a cutout on the bolt bar activating lever.



The next safe, of the wall variety, was interesting (see Photograph 6). I had never seen one of these before. An interesting little unit, that when I figured out how it was to open, had no trouble manipulating it. The combination is dialed to the opening index which is at the 9:00 o'clock position. After dialing the three numbers, the dial is turned to zero and is moved to the left, towards

6. Combination is dialed and then whole dial is moved towards the opening index located at 9:00 o'clock to open tapered spring bolt bar.



7. The back of the lock with the bolt extended in the unlocked position.



the opening edge of the door. This allows a spring retracted flat tapered bolt to 'clunk' into the lock and allows the door to open. The unit was identified as model number 6500. It was made (or imported) by Schwab.

Photograph 7, shows the back of the lock with the bolt extended in the unlocked position. There is a detent near the bottom of the bolt that allows the bolt to shoot out into the locked position when the door is closed and the dial spun.

Manipulation technique is similar to that used when dialing open a STAR round door safe. The distance the dial moves to the left gets larger when wheels are under the spring loaded lever. If I can, I will eventually get to photograph the inside of one of these units. Reminds me of the Murphy type of safe where one had to pull the combination dial out to allow the unit to open.

The point of this romp through safe opening is that it is NOT necessary to know the manufacturer of any safe you are about to open. Safe opening is a learning experience. One learns from past openings.

Open, think about your options, and prosper! **TL**

NATIONAL
AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

www.laserkey.com

medeco
HIGH SECURITY LOCKS

**Integrity.
Ingenuity....
security solutions.**

[Click here for more information](#)

Quick Entry

UPDATE

by
Steve
Young



1998 Nissan Frontier

The 1998 Nissan Frontier represents the first major change to the Nissan pick-up truck line in over ten years (see Photograph 1). The Frontier features the new Nissan 10-cut lock system as well as a more heavily protected lock linkage than has been used on previous Nissan pick-up trucks.

To unlock the truck, begin by wedging open the door cavity at the base of the window and just forward of the outside door handle (see Photograph 2). Once you have inserted an inspection light into the door cavity you should be able to see a diagonal linkage rod coming upward from the latch. There is a sheet metal guard located just above the visible rod, which protects the lock linkage and bell-crank. You will be inserting the Tech-Train TT-1003 tool (Illustration A) through the small opening at the forward end of this guard (see Photograph 3).

Insert the short end of the tool into the door and guide the tip of the tool into the upper edge of the opening. You will feel the tip of the tool contact the lock linkage rod as soon as the tip of the tool is out of sight. Hook the tool over the linkage rod by feel and then lever the linkage forward in order to unlock the truck.

If you cannot locate the linkage, or you do not have an adequate inspection light, you can also locate the linkage rod by feel. When working by feel, you want the tip of the tool to be at the same depth as the outside door handle and about two inches forward of the outside handle. When the tool enters the cavity where the linkage rod is located, you should be able to see movement in the inside lock operator.

If you have trouble locating the inside lock control linkage rod, the tool may be too low in the door. If the tool is too deep, it will catch on the handle linkage rod before it can contact the lock control linkage. If this is the case, you will see the inside handle move instead of the lock control. **TNL**



1. The 1998 Nissan Frontier features the new Nissan 10-cut lock system.



2. Begin by wedging the door cavity just forward of the outside door handle.



3. There is a small opening at the forward end of this guard.

Vehicle:

1998

Nissan Frontier

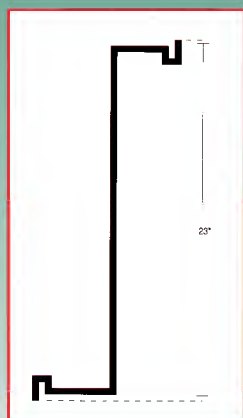
**Direction Of Turn
(passenger side):
Counter Clockwise**

Tool:

TT-1003

**Lock System:
Nissan 10-cut**

**QUICK
REFERENCE
GUIDE**



A. The Tech-Train TT-1003 tool.

IC

Lock Introduction

by Gerry Finch

This is the first in a series of articles that will explain the Arrow-Best- Falcon type interchangeable Core Cylinders in depth. I will explain the construction; operation; assembly and disassembly; determining the pinning of the core; pinning the core; picking the core to open; picking the core to remove it from the housing; and decoding to obtain the control key biting as well as the top master key biting.

This article will serve as an introduction to the Core and how it differs from standard Pin Tumbler cylinders.

One of the first difficulties the newcomer to the locksmith profession encounters is the lack in consistency of terminology or "What in the world do I call this thing?" syndrome. Locksmithing is noted for the various terms used for the same part or action performed. The language not only varies from person to person, but from area to area. This variation in usage of terms by different locksmiths can be mainly credited to the method or manner in which they learned the profession.

Some progress has been made in standardization of terminology in the trade, but not nearly enough. There are several different glossaries available to the new locksmith, but among them there is considerable disagreement as to terminology. Even the various locksmith schools cannot agree on terminology. The problem is that most of these glossaries have been compiled by a few individuals and reflect mainly their idea of the terms.

The only acceptable glossary in my opinion is one that has been assembled with input from

manufacturers, distributors and locksmiths representing different areas of the country. Sound impossible? Well it isn't, and a glossary of this type, though limited in scope already exists. It is "The Professional Glossary of Terms Relating to Cylinders, Keys and Master Keying."

This glossary was put together by the master key study group of the A.L.O.A. sponsored national task group for certified training programs. After the first draft was assembled, it was distributed to several major manufacturers, distributors and locksmiths who suggested additions, deletions and changes. It was again revised and distributed and finally put into finished form after a second review by various concerned groups. It was copyrighted by A.L.O.A. and is available from them. If you do not have a copy of this glossary, I urge you to obtain one. It is one more step towards being a true professional and it is a great learning tool as well.

I would like to suggest that this would be a good time for A.L.O.A. to appoint another group to continue where the first group left off and put together a glossary of terms

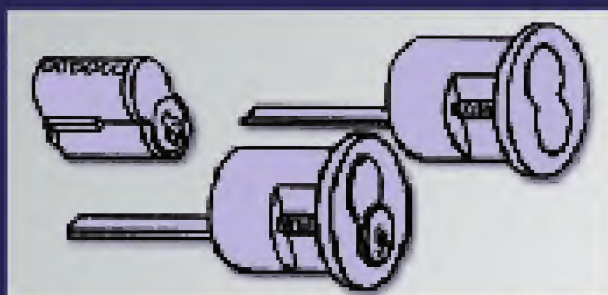
concerning
locks, lock

Part 1

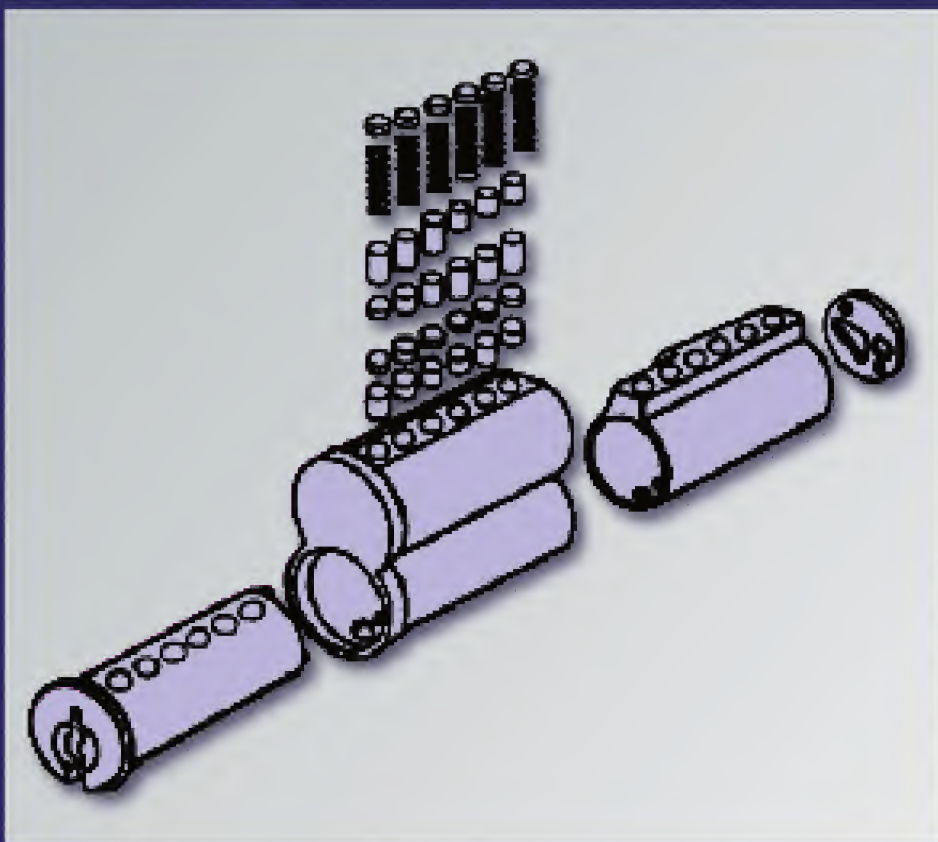
parts, lock installation, lock repair, locksmith tools and similar related items. This would be a good project upon which to expend some of our membership dues and would be another step in the direction of a unified and professional organization as well as a real help to newcomers to our profession.

Now lets answer our original question. What is the Interchangeable Core and how and why is it different than a standard pin tumbler and a removable core cylinder.

An interchangeable core (IC) is a key removable core which can be used in all or most of the core manufacturers product line. No tools other than the Control key are required for removal of the core (see Illustration 1).



1. An interchangeable core (IC) is a key removable core which can be used in all or most of the core manufacturers product line.

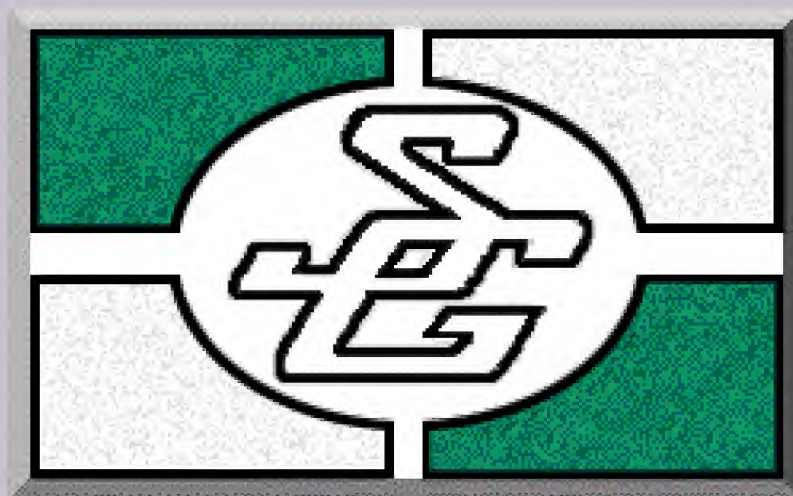


2. The core is a complete unit with a figure eight shape. It consists of a shell, plug, sleeve, top, bottom, master and control pins, cylinder springs and a plug retainer which also serves as the key stop

The housing shown is for a rim type cylinder. The housing can also be a mortise cylinder shell, a padlock body, door knob or some other specialized type of locking device that will house the core.

Let's expand on this and clarify what the term core means in the jargon of the locksmith. The core is a complete unit with a figure eight shape. It consists of a shell, plug, sleeve, top, bottom, master and control pins, cylinder springs and a plug retainer which also serves as the key stop (see Illustration 2).

The last question brings up the difference between an interchangeable core and a removable core. As stated in the first definition, an interchangeable core can be used in all or most of the core manufacturers product line. Again, according to the glossary, a removable core is a key removable core which can only be installed in one type of cylinder housing, rim cylinder or mortise cylinder or key in knoblock. Simply, the difference is that an interchangeable core can be removed from its present housing and placed in a different type of locking device which is designed to



**Choose S&G Comptronic
electronic safe locks for...security...
technology...tradition.**

[Click here for more information](#)

accommodate it. A removable core, however, can be removed by a key from the locking device it is presently housed in, but can only be used in another device of the same type.

There is another type of cylinder which is often mistaken for an interchangeable or removable core. It is actually a removable cylinder and it appears outwardly to be one of the above mentioned type of cores. A good example of this is the Weiser padlock cylinder. The outline of the cylinder is of the figure 8 type when viewing the padlock from the bottom. The cylinder, however, is not key removable. To remove this cylinder the padlock must be open and a small pin located in the hole where the nose of the shackle seats must be depressed. There are other types of padlocks that have cylinders with the figure 8 configuration also.

A Schlage padlock, a standard for many years, appears to be of the interchangeable core or removable core types, but is NOT (see *Illustration 3*). Like the WEISER it can only be removed after the padlock is opened and a small cylinder retainer screw is backed off

3. A Schlage padlock, a standard for many years, appears to be of the interchangeable core or removable core types, but is NOT.

in the shackle hole. American also manufactures a standard pin tumbler padlock that appears to be an interchangeable or removable core. To complicate matters, they also make a padlock body that will accommodate Best-Falcon type cores. Only after working with the various types of cores and cylinders for a period of time will the locksmith be able to identify whether it is an interchangeable core, removable core or a removable cylinder.

To further complicate the subject of what is an interchangeable or removable core, the manufacturer,



Russwin, used the term recore cylinder for years to describe their interchangeable core cylinders. Happily, as of December 1994 in the latest cylinder manual published by Corbin-Russwin, they now refer to them as interchangeable cores. **TNL**



SCHWAB CORP.

Fire protection for your vital records.

Free freight!!
No middle man!!

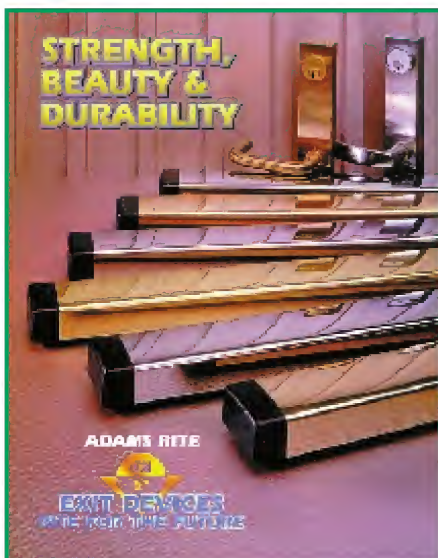
[Click here for more information](#)

Literature & Brochures

New manufacturers and distributors catalogs and brochures to add to your product reference library.

Adams Rite Exit Device Brochure

Adams Rite has a new full-color brochure that covers their entire line of exit devices. This all inclusive brochure features



their Surface and Concealed Vertical Rod, Mortise, Rim, Top Rod Only and Inset designs. Each patented design incorporates the same extruded aluminum pushbar, which gives designers and specifiers flexibility in application, while maintaining consistency in appearance. The unobtrusive pushbar design greatly reduces wear and fully satisfies ADA guidelines for accessibility and clearance. And, despite the slim lines and clean look, these exit devices are every bit as strong as the bulkiest hardware on the market.

Contact Adams Rite at: (310) 699-0511.

Architectural Design Guide by Stanley

A new, 12-page condensed guide to high performance hinges and hardware has just been released by Stanley Commercial Hardware of New Britain, Connecticut. The Architectural Design Guide has been created to provide architects and other specifiers with a handy working tool highlighting key information on a broad range of products grouped for specific types of building projects.

For additional information call: 800-337-4393.

DoorKing Introduces New Brochures

DoorKing has introduced a new product brochure designed for dealers to make presentations to the end user. This new piece

is the fourth in the series that combines graphic representations with product photographs that help the installing dealer make an aesthetically pleasing and professional presentation to the ultimate user of the companies products.

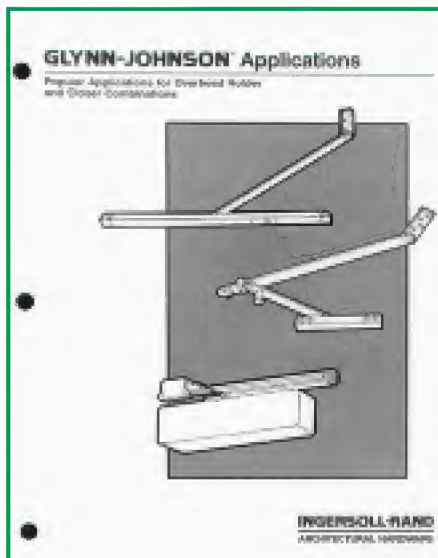
DoorKing has purposely eliminated all company contact information from the brochures, and has left an area designed to accept the Dealers businesses card so that all contact information goes directly to them.

For more information call: 800-826-7493, Fax: 310-641-1586, E-mail: infor@doorking.com.

Glynn-Johnson Offers New Application Manual

A new 32-page manual covering popular applications for overhead holder and closer combinations is now available from Glynn-Johnson. The illustrated manual gathers into a single publication the latest sizing and compatibility information





needed to apply Glynn-Johnson overhead holders and LCN closers to the same opening.

Copies of the new Glynn-Johnson Applications manual are available on request. Call: 800-525-0336. Fax 1-800-525-0337.

Jensen Tools Announces New Catalog

The latest full-color Jensen Catalog is designed to bring the tool kits and cases developed by Jensen Tools, hard-to-find specialty tools and other needed items to the attention of technicians and engineers throughout the United States and abroad.



Over 100 new products have already been introduced this year, with more to be featured in each catalog issue. Among the latest items in the catalog is an electronic equipment service kit; a number of recently released scopes and meters;

two multi-purpose tools; and sets of ESD safe screw-drivers with static dissipative handles.

For a free catalog call: 800-425-1194 or 602-968-6231. FAX: 800-366-9662. Web: <http://www.jensentools.com>.

LAB Product Guide

LAB's 1998 Product Guide features full-color photographs of the entire locksmith product line, including universal and LAB brand original pins. It also features the full line of kits, including the Wedge, the Dur-X Series, Benchmate Woodline kits and



SRI
SECURITY
RESOURCES INC.

SRI and Tech Train Productions are the automotive specialists - your best source for automotive tools, manuals, and videos.

[Click here for more information](#)

LAB brand original design pin kits. In addition, the Product Guide shows LAB tools and accessories, such as pick sets, turning tools, apparel, storage units and more.

**Lockmasters®
New Tool Catalog**

Call today for a free copy of Lockmasters newest catalog featuring over 180 new products. The catalog includes automotive opening tools, wire installation tools, a wide variety



of pin kits and accessories, picking tools and a broad selection of quality locksmithing tools from leading manufacturers; these include A-1, HPC., LAB, Rytan, Labor Saving Devices, and others. Just as we have been committed to providing the necessary classes and technical support for safe and vault tools, Lockmasters will also continue this commitment for our newly expanded product base.

**MCM Electronics
Newest Catalog**

MCM Electronics latest catalog features more than 4,000 new products including project accessories, semiconductors, connectors, test equipment, computer and home audio products, along with thousands of original OEM TV/VCR repair parts.

Now with more than 37,000 in-stock items, you're sure to find the brand names you've grown to trust. Brand names such as Weller, Xcelite, Klein, Fluke, Hitachi, Sencore, Tektronix, Tenma, RCA, GE, Panasonic, ECG, Philips, Magnavox, Proscan, Quasar, Technics, Lexmark, Pioneer, Monster Cable, Sony and more!



For a **FREE** copy of the newest catalog, write to MCM Electronics at 650 Congress Park Drive, Centerville, OH 45459-4072, call toll free 1-800-543-4330, or visit our website at: www.mcmelectronics.com.

Monaco Lock Catalog

Monaco Lock Co. is proud to introduce their Vol. 10 full-line catalog called "The Key to Security." This 384 page catalog



STRATTEC™

***The world's largest producer of
automotive locks and keys.***

[Click here for more information](#)

proves to be their best ever. It is filled with more product information, dimensions, exploded parts views, and the latest product updates available at the time of print.

NAPCO Sensor New Brochure

NAPCO Security Group is pleased to present a colorful, 6

page brochure depicting the NAPCO Sensor Division's most comprehensive product line ever. "The Power of Innovation", as this catalog is titled exemplifies NAPCO's commitment to providing a state-of-the-art, advanced line of sensors and accessories, for all your installation needs. The inside of the brochure contains color photos of each sensor in the line, from breakthrough PIRs with Room Temp Alert and D.C.I.D.™ technology, to NAPCO — exclusive Adaptive™ Dual Sensors.

For ordering information contact NAPCO at 800-645-9445, ext. 64, and ask for Sales/Customer Service.

Security Lock Issues Arrow Catalog

The extensive line of Arrow Architectural Hardware is described in a new 38 page Reference Catalog now available from Security



Lock Distributors. Contents include technical descriptions of all locks, cylinders, closers, exit devices and interchangeable cores plus complete information on options, accessories, functions and finishes.



ASP - Your Auto Service Center for the World

[Click here for more information](#)

For additional information contact Security Lock Distributors, Inc. at: Phone: 800-847-5625, Fax: 800-878-6400, e-mail: SECLOCK@IX.NETCOM.COM, web: <http://www.seclock.com>.

Tesa Safe Brochure

A new brochure on complete details of the ultimate hotel safe imported by Safe Warehouse International of Knoxville, Tennessee. The electronic locking system is by Tesa of Israel, and all consumer reports give it high ratings as virtually trouble free.

For information call: 800-695-2815. Fax: 423-675-2850.

Von Duprin Exit Device Brochure

A new 4-page brochure presents features of the Von Duprin LP9247 Low Profile Exit Device. The device installs inside a Steelcraft hollow steel door and is designed to provide maximum opening clearance by protruding only 1-3/8" from the face of the door.

The Brochure describes mounting styles available, including standard top and bottom

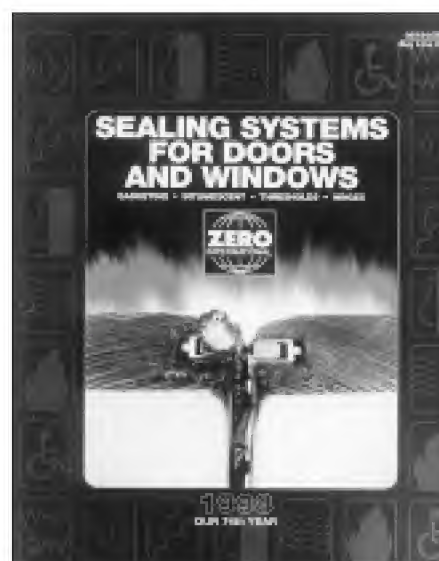
concealed vertical rod or top only concealed vertical rod with LBR (less bottom rod) option. Available in three-foot or four-foot widths, the UL-listed device is intended primarily for cross-corridor fire applications.

Also illustrated in the brochure is a cutaway view showing the door construction and exit device installation.

Copies of the brochure may be obtained from Von Duprin Division, P.O. Box 6023, Indianapolis, IN 46206.

Zero's Intumescent Innovations 1998 Catalog

Information about Zero International's complete line of door and window gasketing, thresholds, saddles and high-performance continuous hinges is now available for 1998. The 36-page color catalog provides specification guidance and full-size schematics for hundreds of components and integrated systems for blocking flames, smoke, air, light and sound. All are engineered for quality, performance and durability. Along with Zero's highly rated Sound Trap acoustical sealing



system, the catalog features Intumet fire and smoke seals and intumescent gasketing assistance for door manufacturers as well as specifiers.

For more information or a catalog, contact: Zero International; 415 Concord Avenue, Bronx, NY 10455-4898 USA; Telephone 800-635-5335 or 718-585-3230; Fax 800-851-0000 or 718-292-2243; E-Mail: Zero@Interport.com.



**We have it all.
Quality, Value,
& Service.**

[Click here for more information](#)



**The Innovation You
Expect, with the
Flexibility You Need!**

[Click here for more information](#)

Sometimes you can't help but laugh when you see some of the situations people get themselves into. This next example reads like an old joke, but it actually happened:

I was working for a man whose RV was parked in a local trailer park and he needed the locks changed on it.

"Been here long or are you just passing through?" I asked him.

He said that his house was just a couple miles away, but that she had kicked him out because of just one little thing he had said wrong.

"You said one thing wrong and she kicked you out of the house?" I asked. "If my wife was like that I'd have to have plumbing and a phone line hooked up in the doghouse because when I open my mouth, it is only to change whichever foot was previously in there."

I then asked him what it was he said to deserve such treatment.

He said that his wife asked him this question, "If I died suddenly, would you live in this same house with your next wife?"

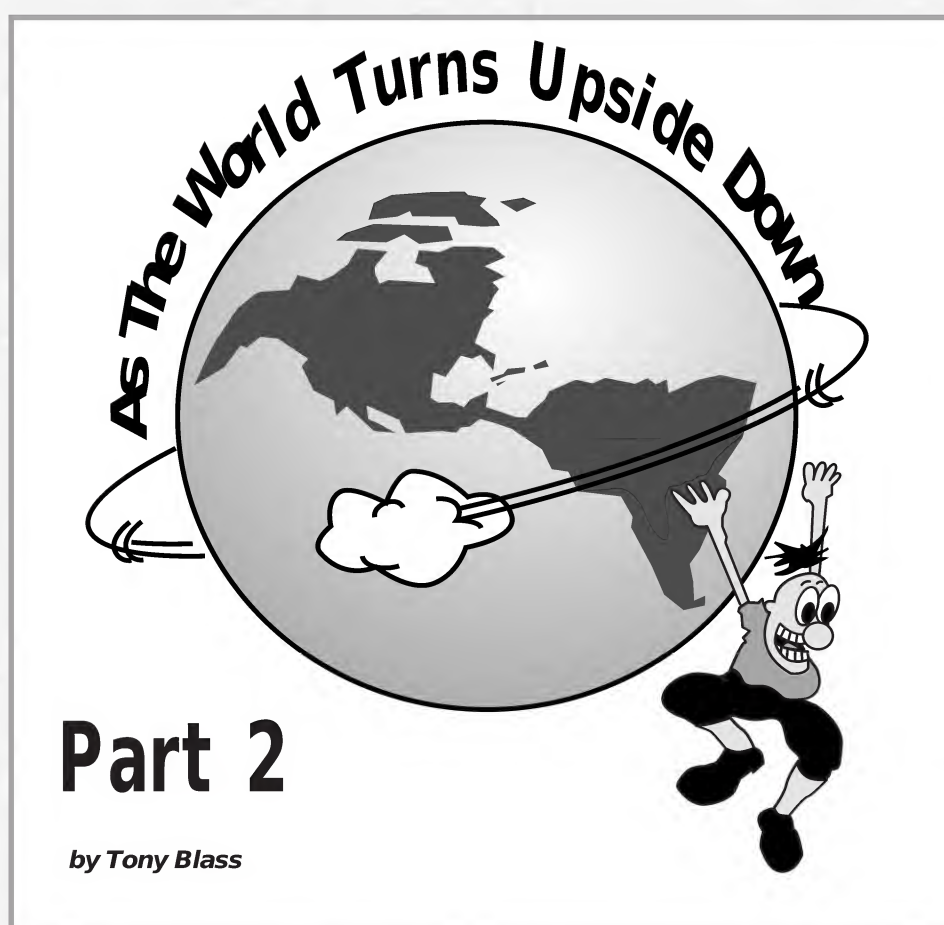
He said that he responded, without thinking, "Of course not, dear, she hates this house."

I'm sure there are many times while changing locks, that you are treated to a synopsis of what's going on in the family by hearing segments of the customer's phone conversation. While I was working on a customer's locks, I overheard the following conversation:

"Oh, don't get me wrong, John, I want this to be an amicable divorce. I hope you and your trampy.... I mean trusty little secretary are very happy. I'm just concerned about how comfortable you two are going to be on the 12 pesos a month that my lawyer says will be left for you after the crucifixion....I mean court proceedings. But I'd love to have you two for dinner sometime, and I mean that in a literal sense."

Then there are those customers who you must admire for their ability to look reality directly in the face and deny it. Just the other day, I changed the locks for a lady who complained that her ex-husband — whom she had not seen or heard from in 40 years — was getting into her garage and taking things.

"How do you know it was him?" I asked.



"I just know," she responded.

It's strange how the human mind gets paranoid as it ages. If this lady was thinking correctly, she would be thankful that her ex was not sneaking into her bedroom every night and draining her of her spiritual essence, like my ex does to me.

Then there are those times when you are able to observe big chunks of the soap opera during a single job. One time, I worked for a lawyer who was the executor to the estate of an elderly man who had recently passed away without leaving the combination to his safe. During the 30 minutes it took me to open the safe, I was watched closely by eight people. They included the dead man's family and his young girlfriend.

The girlfriend proclaimed for all to hear, "George promised me that he had signed the deed to the house over to me and that it is in the safe."

One of the female members of the man's family responded by saying, "I wouldn't bet your collection of cheap make-up on that, Melinda. I'm afraid you'll be spending your declining years in the home for unwed floozies."

This warm exchange went on for

the full half hour it took to open the safe, making for nice relaxed working conditions. I was secretly hoping that the safe contained a will leaving absolutely everything to the Imelda Marcos fan club, because I felt like I was the Maitre'D at a banquet for vultures.

When the safe door finally swung open, the eight people observing almost fell into the safe to see only a box of paper clips and a magazine that would best be described as being aimed at an adult male readership, although the ability to actually read was not necessarily a requirement. Final score: Family one, Floozy 0.

Sometimes you feel bad when you can't offer the customer the advice they need. A few years back I had an additional ad in the phone book in which I advertised to sell and install smoke detectors. This was before they were available in all of the hardware stores. I almost sold one, but my mother never got back to me on that. Anyway, I received a call one day from a girl of about 12 years of age.

"Can you help my dad quite smoking?" she said.

"Well, business is slow so I'm

willing to try just about anything, but tell me, why did you call me? I am a locksmith."

"You have an ad under smoke detectors," she said.

"That actually would be smoke DETECTORS, but you know, if we put enough of these things around the house, then I'll bet we can get him to quit on his own," I said.

Sometimes the personal problems that customers present me is a minor one, in which case I will occasionally try to introduce a bit of levity. This levity may or may not be appreciated by the customer. One female customer had a one year old son who had already figured out how to climb up on a box and open the knob and deadbolt. Once it was open he would then go out into the neighborhood to make new friends and see the world.

When she asked me what could be done to keep him inside, I suggested that maybe she was just being an overprotective mother. If she allowed her son to travel on his own to see other cultures it may be quite educational.

"Anyway," I said, "I think that kid's been sponging off you long enough. It's time for him to sink or swim on his own."

I then informed her that I too had run away from home in my younger years and that it had broken my mother's heart. I just wasn't able to take it anymore when I saw the freedom the other 31 year olds had.

At this point in the conversation, for some reason she felt compelled to ask me, "Are you actually a LICENSED locksmith?"

Another of my female customers was describing what a shambles her life was. In the last year, her husband had left her, her house had caught on fire, and she had just smashed up her car.

She said, "Compared to me, even Kathy Lee Gifford had a good year. What can I do to end this bad luck?"

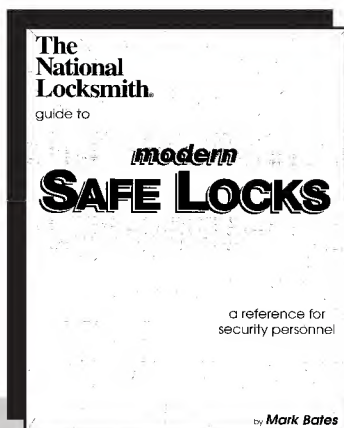
I wasn't sure if she would be open to my method of sacrificing a goat to the God of Good Fortune, so I could only recite for her the old adage, "Life is what happens when you are making other plans."

TNL



HPC, Inc. Designing Excellence and Manufacturing Quality since 1956

[Click here for more information](#)



*This material was excerpted from the Mark Bates book titled Modern Safe Locks. The book covers combination operating and changing procedures for virtually every combination lock both mechanical and electronic, that you will encounter on a daily basis. Modern Safe Locks is available for purchase through **The National Locksmith**.*

LaGard

MODEL:	1980 (1980 to present)
DESCRIPTION:	Three wheel, key-changeable combination safe lock. Dial is numbered from 0 to 99 clockwise. Regular change only.
RATINGS:	UL Group 1R
FACTORY COMBINATION:	4XL to 50, 1XR to stop.
OPENING PROCEDURES:	<p>WHEN SET TO A 3 NUMBER COMBINATION:</p> <ul style="list-style-type: none"> a. 4XL to 10 b. 3XR to 20 c. 2XL to 30
TO LOCK:	Turn dial left four times.
FORBIDDEN ZONE:	0 to 20
CHANGING PROCEDURE:	<p>WITH THE SAFE DOOR OPEN...</p> <ul style="list-style-type: none"> a. Dial the existing combination to the changing index (steps a through c under "Opening Procedures") b. Insert change key and turn it left 1/8 turn. c. Dial new combination to changing index (steps a through c under "Opening Procedures") d. Turn change key right 1/8 turn and remove it. e. Test combination at opening index (steps a through d under "Opening Procedures")
TOOLS NEEDED:	LaGard No. 1312 change key. (See notes)
NOTES:	There is an odd feel to the dial when turning. A spring-driven armature rides on the drive cam which helps thwart manipulation. This lock has unique wheels that were designed to be changeable either with the key or by a hand change technique.

LaGard



LaGard 1980



Von Duprin's Chexit™ delayed egress device.



Delayed Egress Devices

by Patrick R. Olmstead



Types of doors that require access control are emergency stairwell exit doors and entrances.

There are great opportunities for locksmiths in delayed egress devices. They answer a need to provide door security without compromising life safety. They also represent an attractive source of new profit and they aren't much harder to install than a rim exit device. If you're not tapping this market, take a look at what's involved.

Security with Safety

Delayed egress devices, such as Von Duprin's Chexit™ (see *Photograph 1*), are an effective way for building owners, retailers, and other customers to resolve the need for a tradeoff between life safety and security, especially on "back door" fire exits. These self-contained units are also known as controlled exit devices. After being activated, they stay locked for a fixed time, usually 15 seconds, while sounding an alarm before releasing to allow exiting. The delay allows time to respond to an unauthorized door opening, but is short enough to prevent someone from being trapped in a locked area.

In a true emergency, the delay is bypassed and the device unlocks immediately, through a tie-in with the building's fire alarm, sprinkler system, and/or seismic detector. The alarm not only announces that someone has activated the device but also discourages unauthorized use.

Potential for Profit

There is great profit potential in adding delayed egress devices to your product offerings. The same people already buying panic hardware and locks are the ones who often need delayed egress. With their ability to protect and preserve, these devices are an easy sell to someone who needs to meet building and life safety codes without giving up security.

With their added features and benefits, they are necessarily more expensive, but the profit picture is very good.

Easy to Install

Some new products require a lot of learning before you're ready to install and service them. Delayed egress devices aren't any more difficult to install than a standard rim exit device. The biggest difference is the need for wiring, but an electrician can easily install the low-voltage power supply and pull the proper wires. Plug-in connectors on the devices make the hookup easy.

Although each unit works alone to protect an opening, it normally will be wired into a building's alarm system to provide instant emergency egress. This is all part of the electrical hookup. Power can be carried from the frame to the door itself by a simple door loop, pull-through hinge, or power transfer. The locksmith will find mechanical installation is no more difficult than for any other exit device.

Where and How They're Used

A prime market exists for delayed egress devices in retail establishments, especially those handling small, high-value items such as jewelry, electronics, and even tools or hardware. While restaurants typically get by with simple exit alarms to deter people from skipping out without paying, the stakes are higher when someone runs out the back door with a microwave, television set or portable computer.

Delayed egress devices are popular in shopping malls, where a common corridor would let someone escape quickly. One discount retailer found that theft dropped off dramatically after the delayed devices were installed on secluded fire exits. In

several instances, a shopping cart containing expensive electronic equipment was found by the door when the alarm was activated.

A major regional hardware chain protected a fire exit to a common corridor with a delayed egress device and prevented thefts of power tools and other high-value portable items. "We've seen suspects in the area, so we know they are looking it over, but it has stopped them from going that way," says a store manager.

The delayed devices were installed at several Parisian Stores, including one near Nashville, in Franklin, Tennessee. A regional loss prevention manager for the company says the two types of doors that require access control are emergency stairwell exit doors and entrances for employees (see Photograph 2).

On the employee entrances, a keypad is added to control access. The regional loss prevention manager says there have been no incidents of theft at the store by unauthorized door usage. "I think it's a deterrent factor in itself," he says of the alarmed delayed egress devices.

He mentions another company that

has had losses from people taking merchandise and running out an exit door to a waiting car. In those cases, the doors were only protected by a conventional alarmed exit lock, he points out.

One of the first uses for these devices was in school libraries, where students impatient with long checkout lines would skip out the back door with several books. Installing the alarmed devices cut book theft significantly while still meeting life safety codes covering emergency exits.

At Cincinnati's Children's Hospital Medical Center, delayed egress devices were installed on outlying exit doors (see Photograph 3) to guarantee the safety of infant and child patients against abduction. Unauthorized use was another problem, with employees going out the doors to smoke and setting off previous alarms. The alarm, delay, and related warning sign with each device have discouraged unauthorized use and helped deter possible abductions.

Another health care related application is in nursing homes and other care facilities, especially those

**Lockmasters has a
44 year history of
training security
professionals.**

[Click here for more information](#)

3.



At Cincinnati's Children's Hospital delayed egress devices were installed on outlying exit doors.

catering to victims of Alzheimer's or other mental impairment. Wandering patients are stopped by the delay, and the staff is alerted by the alarm, preventing a possible tragedy when a resident walks out into traffic or bad weather.

Even a multi-screen theater benefited from installing the devices. At Ward Parkway Cinema, Kansas City, Missouri, people would try to leave through an emergency exit that opened into an adjacent auditorium, interrupting the showing still in progress there. A standard exit device would not have prevented this distraction. Locking the door would have stopped it but also would have violated building codes by preventing emergency egress. Simply alarming the door alone would have increased the disruption with a combination of light and noise every time someone opened it. A delayed egress controlled device installed on each of the doors that connect two auditoriums solved the problem.

College dorms have used the devices to control after-hours traffic completely. When side or back doors are equipped, students can't come in late or let their friends in for parties without being detected. Allowing entrance only through a controlled or staffed front door provides control. Fining those who set off the alarm adds deterrence. As always, the delay both discourages unauthorized use and allows time for a response.

Airports and other public facilities are still another big user, to protect exit stairwells from unauthorized use and maintain the security required by Federal regulations. There are all sorts of possibilities, many among your present customers. Check out this business opportunity, and you'll also help your customers solve a long-standing problem.

TNL

Major
MANUFACTURING, INC.

Installation Tools
The Professionals Choice

[Click here for more information](#)

BEGINNER'S CORNER

Detex ECL-230D Exit Control Lock



by
**Jim
Langston**

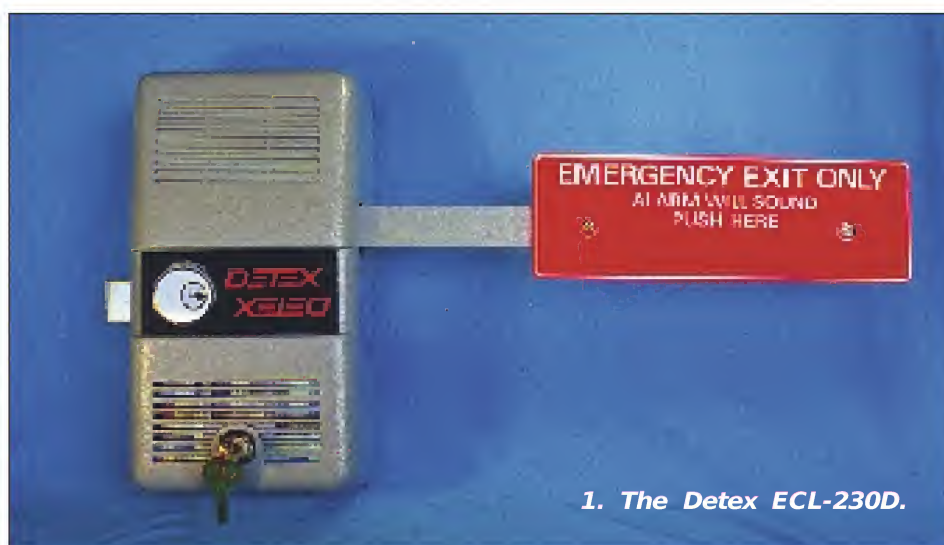
The Detex ECL-230D Exit Control Lock is a UL listed emergency egress system designed to comply with most state fire Marshall lists as emergency exit and panic hardware. The ECL-230D is a single point deadbolt locking device that deters unauthorized entrance from the outside while allowing emergency egress from the inside. It also provides both inside and outside key control bypass capability. The unauthorized use of exiting a door will sound a high decibel alarm, and can only be reset with a key. This alarm can even be heard in a high noise environment.

Use a key on the inside or on the outside permits unlocking the door without sounding the alarm. Also, when you lock the inside or outside of the ECL-230D with a key, the unit is automatically re-armed. If anyone opens the door by pushing the paddle it will sound the alarm instantly. The ECL-230D can be mounted on any door, right handed or left handed.

Photograph 1, shows what the ECL-230D looks like. To rekey this exit unit, you must first remove the outer cover with a key. Then you can remove the lock cylinder by removing two screws (see Photograph 2). Next you must remove the two lock cylinder screws on the back of the cam bridge (see photograph 3). Rekey the rim cylinder as you would any other lock.

The cam bridge housing is designed for 5 pin cylinders. If you need to use a longer cylinder, you will need to contact Detex Lock Company at 1-800-729-3839 for technical support.

Now you can put the cylinder back into the cam bridge housing, and then put the cam bridge housing back in the mechanical assembly (alarm unit). Replace the cover, and try it.



1. The Detex ECL-230D.

If you have an older unit, and it works with a six volt battery, Detex has a nine volt replacement system. The part number from Detex is PP-5567.

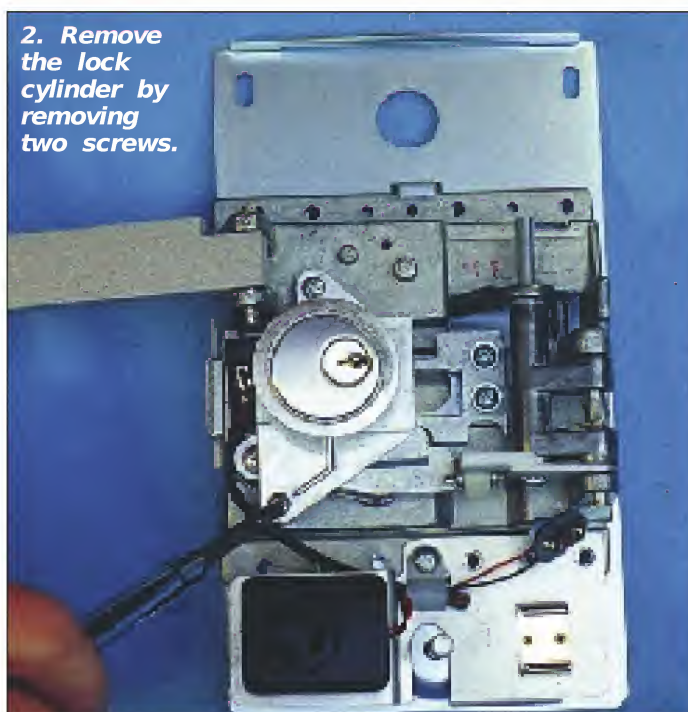
Following is a list of trouble shooting tips you will need:

Cover Lock Key Does Not Turn

- Confirm key number on cylinder face plate matches number on the key.
- Lubricate with WD-40.

Inside Key Control (IKC) Key Is Hard To Turn

- Open door. With the door open, turn the key to extend and retract the bolt. If the key turns freely, the problem is misalignment of the bolt and keeper.



2. Remove the lock cylinder by removing two screws.

- Close the door and extend the bolt. Check the bolt alignment and adjust the keeper as required. If the key is hard to turn while the door is open, the problem is because the cylinder tailpiece is too long. Remove the cylinder and shorten the tailpiece.

Continued on page 94

medeco
HIGH SECURITY LOCKS

The market
leader in
locking
systems for
security,
safety, and
control.

[Click here for more information](#)

Continued from page 92

**The IKC Key Cannot be
Removed When the Bolt is
Extended or Replaced.**

- Remove the cam bridge assembly.
- Remove the cylinder.
- Align the timing marks on the housing.
- Remove the key from the cylinder.
- Install the cylinder.
- Secure.

**Cover Cannot be Installed When
Using A 7-Pin Cylinder**

- Confirm that the spacer does not exceed 1/4".

Unit Does Not Sound

- Check/replace battery.
- Check for loose or broken battery leads.

DETEX EA-500 EXIT ALARM

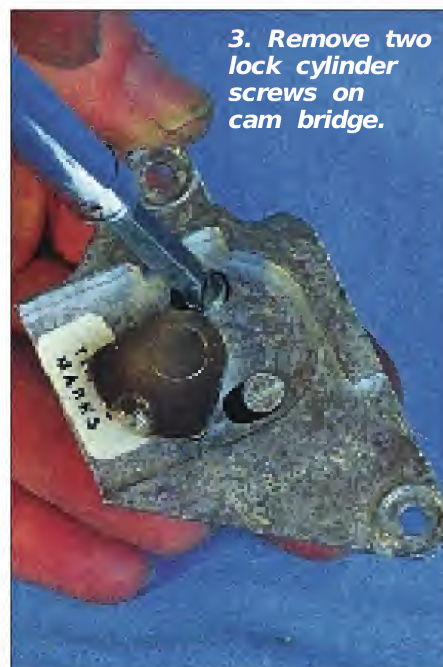
The Detex EA-500 exit alarm is a surface-mount alarm, and is a great exit alarm (see Photograph 4). It is a low cost self controlled door alarm, and employs a 95-decibel directional piezo horn to ward of unauthorized use of a door.

The alarm is triggered by a reliable magnet switching, either internally or externally by separate Detex MS-2049 door switches (see Photograph 5). The internal magnetic activation switch can be positioned to the left or right side of the door, as shown in photograph 5. Any movement of the door opens the switch contacts, setting off the alarm.

To rekey, remove two screws inside the lock (note in photograph 5, where the screwdriver points). In Photograph 6, you can see where the 9-volt battery is located. It is easily serviced.

This unit can also be used with an outside cylinder to gain entry. The outside bypass key can temporarily disarm the unit, allowing the door to be opened and close within a preset time without sounding the alarm. Bypass can also be accomplished by using a remote switch or a Detex access control product to disarm the alarm momentarily.

OKC (outside key control) option lets the user enter the protected door from the outside without triggering the alarm. It also provides the ability to reset the alarm from the outside. An extra



3. Remove two
lock cylinder
screws on
cam bridge.



4.
The
Detex
EA-
500
exit
alarm.

switch assembly is required (Detex part number EA-523).

TROUBLESHOOTING:

Cover Key Does Not Turn

- Confirm key number and cover lock cylinder number are the same.
- Spray WD-40 or any light lubricant into cylinder opening

and slide key in and out. Let sit for approximately 2 to 3 minutes. Retry.

IKC and/or OKC Key Hard to Turn

- Check dimensions on cylinder cut.

Can't Remove IKC/OKC Key With Unit Armed

- Check cam alignment (key removed).

Unit Sounds With Door Secured

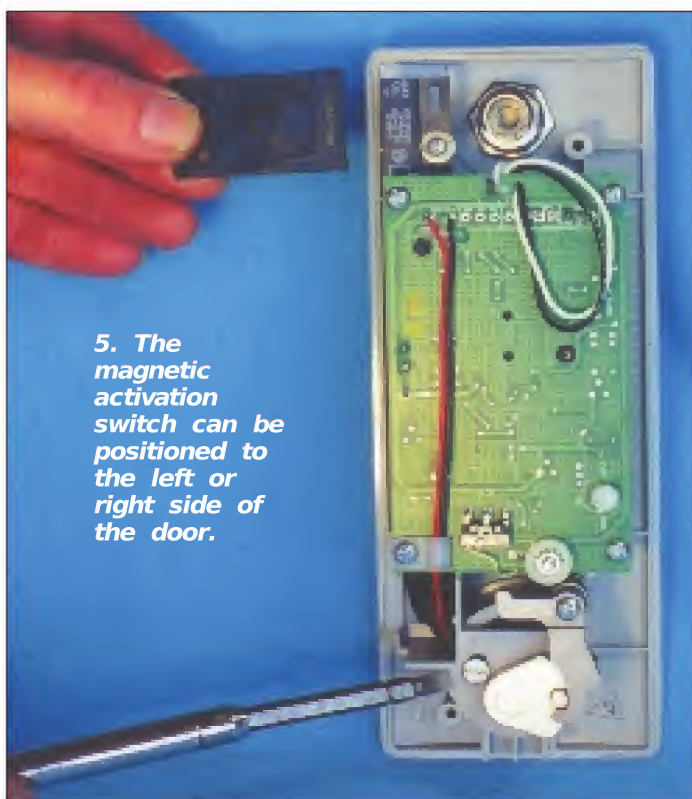
- Confirm external magnet installation.
- Confirm position of internal sensor RH/LH.
- Confirm gap between external magnet and side of backbox (1/4" maximum) shim as required.
- Check to see that the internal sensor and external magnet is properly aligned.
- Check magnet strength. Using a small screw driver touch magnet. Magnet should hold screw driver.
- If external door contacts are being used, check wiring. Unit requires close loop circuit — door secured.
- Contact Detex.

Unit Does Not Sound — "Led" CK

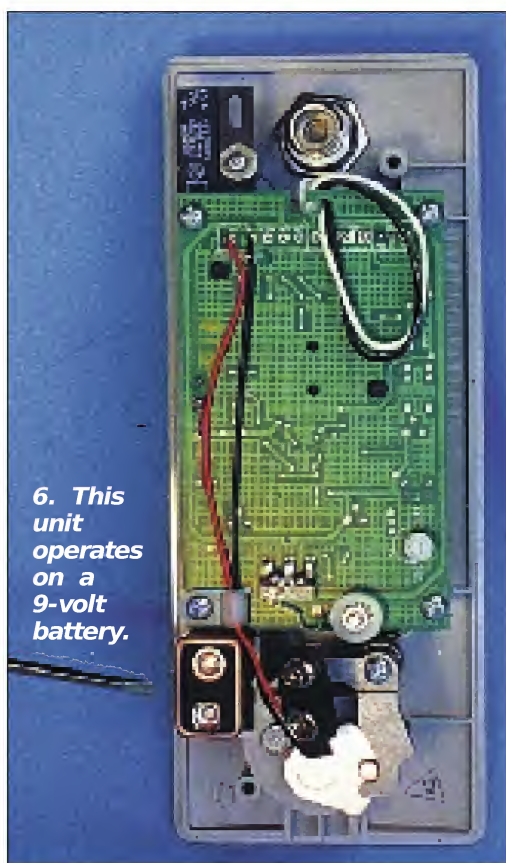
- Arm unit. Turn key max. Wait for "LED" to turn off.
- Open door or remove faceplate from backbox. Unit should sound.
- If unit does not sound — replace battery. Use Duracell only (factory recommended).
- Contact Detex.

Unit Does Not Sound and No "Led"

- Confirm Duracell Battery is being used.
- Confirm installation of IKC cylinder.
- Confirm "Trigger Arm" moves freely must push and release



5. The magnetic activation switch can be positioned to the left or right side of the door.



6. This unit operates on a 9-volt battery.

switch lever. Switch released/opened, unit is armed. Switch depressed/closed, unit is disarmed.

- Replace battery.
- Contact Detex.

NATIONAL
AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

www.laserkey.com

TECHNITIPS

'98 Year-End Prizes!



Grand Prize

HPC's 1200PCH
Punch Machine



1st Prize

Silca Bravo Duplicator



2nd Prize

S&G 6120
Electronic Safe Lock



3rd Prize

Curtis 2100 Duplicator



4th Prize

\$500 in All Lock Products



5th Prize

\$500 in ASP
Auto Locks



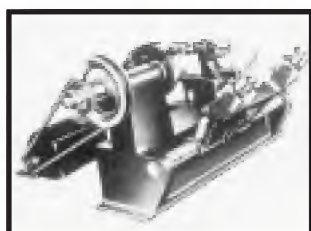
6th Prize

SDC Magnetic Lock,
Keypad and Exit Switch



7th Prize

Arrow Exit Device
and Mounting Kit



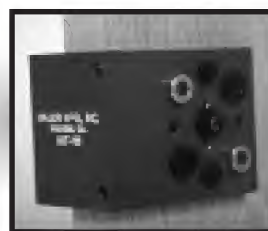
8th Prize

Foley-Belsaw 200
Key Machine



9th Prize

Securiton DK-26
Touchpad and Cpu
Board for Magnetic Lock



10th Prize

Major
Manufacturing's
HIT-111 Drill Guide



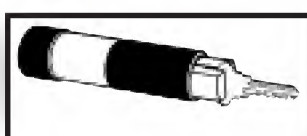
11th Prize

Dewalt Cordless Drill



12th Prize

Sieveking Products
Squeeze Play



13th Prize

Framon Impressioning
Handle

**The 15
Minute
Safe
Opening
Technique**

14th Prize

Book — 15 Minute Safe
Opening Technique by
Jake Jakubowski



15th Prize

Slide Lock's
Master "Z" Tool Set

These Prizes Awarded Each Month!

- All Lock Ford or GM Kwikit
- Aero Lock Tryout Key Set
- Strattec Racing Jacket
- HPC Pistol Pick™
- Sargent And Greenleaf
4400 Series Safe Deposit Box Lock
- A-1 Security Products
- Silca Key Blanks (100 Blanks)
- Pro Lock Pk 15
Professional Lock Pick Set
- Tech Train Training Video
- Sieveking Products
Gm E-Z Wheel Puller
- Major Manufacturing Products
- Slide Lock's "Z" Tool Opening Set
- The Sieveking Auto Key Guide
- Jet Key Blanks (100 Blanks)
- High Tech Tools
- LaGard Combo Guard



16th Prize

Falle Pick Set From Mark
Bates Associates



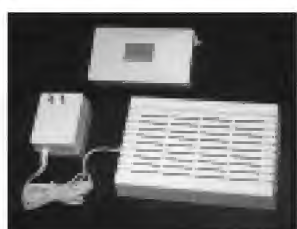
17th Prize

Baxter J V-1 and
J V-5 Code Books



18th Prize

ABUS Padlock's Marine
Padlock Display



19th Prize

Rodan's AV 100 Heavy
Duty Door Annunciator



20th Prize

ESP Products Sampler



21st Prize

Detex ECL-8010W
Wetlock®



22nd Prize

LaGard "Smart
Guard"®



23rd Prize

M.A.G. Engineering
Sampler



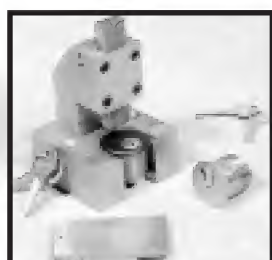
24th Prize

\$500 in Strattec Auto
Products



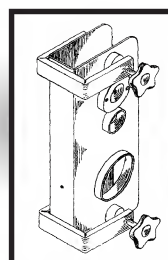
25th Prize

High Tech Tools
2500 Pro Set



26th Prize

Accu-Mark™ Key
Stamping Machine



27th Prize

A-1 J -50
Installation J ig



28th Prize

Mas
Hamilton's
Auditcon
2100 &
Certification
Class

Send in your tips, and win!

How To Enter

Simply send in your tip about how to do any aspect of locksmithing. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Write your tip down and send it to:

Jake Jakubowski, Technitips Editor,
The National Locksmith,
1533 Burgundy Parkway, Streamwood,
IL 60107-1861 or send your tips via
E-mail to: Natlock@aol.com

Every Tip Published Wins

If your tip is published you will win one of the monthly prizes listed. At the end of the year, we choose winners from all the monthly tips published, that will be awarded one of the fabulous year end prizes. All you have to do to win is enter.

By entering, your chances are greater than ever that you will win one of the prizes listed. This is the biggest Technitips prize year ever. Wouldn't you like to be a prize-winner in 1998? If so, enter today!

*Tips
start
on next
page!*



ALL LOCK KWIKIT
WINNER:
Nissan Key Removal

I received a call to remove the tip of a broken key from the ignition of a 1991 Nissan 240ZX. The closest vehicle I could find listed in any of my information was a 1993 Sentra. That information indicated that I had to remove the ignition housing from the steering column before attempting to remove the plug from the cylinder. I think I found a better way.

First, disconnect the battery. Then, remove the plastic trim from around the ignition and then remove the shroud from around the column.

In addition to removing the four Phillips head screws that are visible in front of the knee bolster, there are two Phillips head screws behind the panel. The panel can be “dropped” by removing the five screws that secure the panel. Even after you remove the five screws, you will find that the panel is still held by two plastic tabs. Carefully pull the panel down until the tabs release. Now you can access the other two shroud screws.

Looking on top of the housing, you will see a retaining pin. Use a Dremel tool with a cut off wheel to cut a groove about an eighth of an inch deep behind the retainer, and then widen the cut to about an eighth of an inch. Use an awl or other tool to pry the pin up slightly, then grip it with a pair of ViseGrips and remove. Don't lose the pin since you'll be replacing it. On the underside of the housing, you will find the second retaining pin. Remove it the same way. You can now remove the cylinder.

As you begin to pull the cylinder from the housing, be careful to hold on to the push button release. On the top side there is a small spring and ball bearing which can easily pop out and be lost, if you're not careful. On the bottom side is a small plastic piece which is also spring loaded. Slowly pull the cylinder out putting your finger and thumb over them to hold them in place.

Once you have the cylinder removed, you can pull off the face cap. A metal piece that lies recessed in the face of the plug will now come out, and using a straight pick through the front of the plug, you can push the broken piece of key out of the plug.

With the lock back in the housing, replace the roll pins and tap them

A Few Words From Jake...

*Spring is sprung, The flower's riz:
I'm wonderin' where your really great tip is!
No excuses, please.
Jest git it writ.
And find out what a great prize you'll git!*

by Jake
Lakubowski

O.K.! So, I'll never make the big-time as a poet, however, I'm sure you get the message, unimpressive though it may be. Just remember, when you do send me your tip, be sure to include your physical address along with your name, etc. If you E-mail, fax, snail mail or Pony Express me a tip and do not include your physical address, I can't use the tip - even if it is eloquent, elegant and eligible.

If you need any further incentive, read over the monthly prize list and the fantastic year-end prize list for 1998. By simply writing your latest idea for making some aspect of our job as locksmiths easier, you just might get some of the goodies I'm giving away this year.

Y'all heah what I'm sayin', now?

flush with the housing and repair the Dremel cut with epoxy. Finally, replace the shroud and knee bolster.

William T. Allgood
South Carolina



AERO LOCK TRY-OUT
KEY SET WINNER:
**Cultivating More
Business**

We can all use more business and the best place to get business is from those establishments that are already familiar with your services. After all, they know who you are and the quality of your work.

I do a lot of business with service stations, cafes and shopping malls - basically, anywhere people lock their keys in their car. The owners, managers and security people of these

businesses already know me, therefore they don't usually object to my placing an advertisement in a conspicuous place (like on a bulletin board or in other public areas).

Illustration A, is of a flyer that I use with “tear-offs” on the bottom. By using this style, at least ten potential customers can tear off a tab and take it with them. If the person needs my services immediately, they can tear off a tab and give me a call.

If I used a flyer without the tear off feature, I don't think folks would take the time to write down my name and number. And, if someone took the flyer, no one else would benefit from my services until I put up a new one. I do make it a point to frequently check the flyers I have out and replace those that need be.

This has worked very well for me over the last several months and although it has brought us mainly car openings, etc., it has also generated other work for us as well.

Marc Grizzard
South Carolina



STRATTEC RACING
JACKET WINNER:
Tidel TACC II
Opening

Here is a way to open a Tidel TACC-II without drilling, even when the Medeco key has been lost or broken, or if the switch will not activate the door count-down sequence.

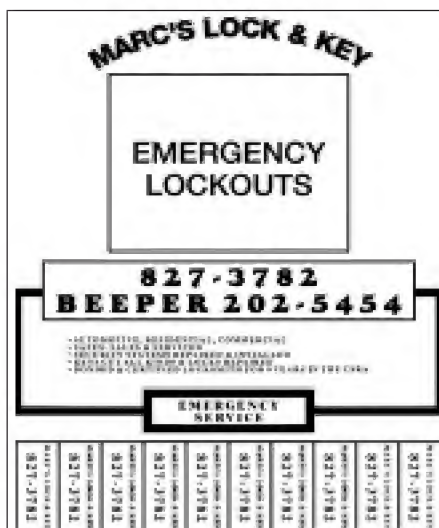


Illustration A.

Continued from page 98



Photograph 1.

First, slide a thin bladed putty knife between the gaps in the hinges about 6-3/4" inches from the floor. Usually the second knuckle on the door is almost directly in line with the drop chute. *Photograph 1*, shows the positioning. You may have to slide the putty knife up and down a little until you feel it contact the plunger on the Cherry Switch (Part #E69-00A).

Once you have located the plunger, center the blade of the putty knife on the plunger and hit the handle of the putty knife with a hammer. This will break the plunger off and cause the unit to erroneously read the door as being open. Once the control panel reads the door switch as being in the open position, you can depress the "door" button on the control panel and open the unit regardless of the position, condition or function of the switch or key, and without any delay.

The only damage that is done to the unit is to the Cherry switch. These switches can be purchased from almost any electric or electronic supply house for around five dollars.

Now, two cautions:

Around 1990 or 1991, Tidel modified the TACC-II's so that the door switch could not be broken in this manner. If you cannot get a thin putty knife to slide between the hinges, then you must drill a 1/4" hole 6-3/4" up from the floor and 2-3/4" in from the right side of the unit. This will put you just to the right of the door hinge. Very carefully drill a 1/4" hole 1/2" deep (mark your drill bit with a piece of tape) until you just break through the door and hinge plate that is welded to the door.

Next, use a small, flat-bladed screw driver to locate the plunger. Once you have located it, center the screw

driver over the plunger and hit the screw driver with a hammer, breaking the plunger off even with the switch (This beats drilling the Medeco switch or drilling for the motor control arm).

Secondly, if the motor control arm is malfunctioning or broken, this method will not gain you entry. If you can, activate the timer with the Medeco switch and after the count-down when you depress the door button. You will hear (or not hear, as the case may be) the control arm motor cycle, but the arm will not lift. You then need to drill for the control arm. Go 12" up from the floor and 1-

1/2" back from the left front in order to open the door.

Tom Cole
New Mexico



HPC PISTOL PICK™
WINNER:
Electronic Key
Machine Calibrator

I found a way to adjust my old duplicator to what I consider, incredible key cutting accuracy for under five dollars. I spent five dollars at Radio Shack and bought two "D" batteries, two "D" battery holders, two flashlight bulbs, two flashlight bulb holders and two sets of alligator clips.



**Make Sargent &
Greenleaf's
Comptronic locks
your choice
for electronic
safelocking
solutions.**

[Click here for more information](#)

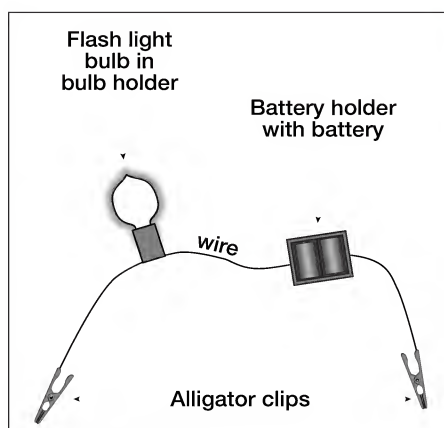


Illustration B.

I put the light bulbs in the bulb holders, the batteries in the battery holders and rigged two testers by attaching a wire to one alligator clip, and then to one side of the light bulb holder. I connected the light bulb holder to the battery holder with another piece of wire and used a third piece of wire to hook the battery holder to the other alligator clip (see *Illustration B*). I made two "testers" this way.

Here's how the testers work:

Place a thin strip of plastic (as an insulator) in each vise of the

duplicator and then place two, identical key blanks in the vises and tighten the jaws. Make sure the key blanks are both firmly seated against the plastic and that the plastic is the same thickness in both jaws.

Now attach one alligator clip to the key blank on the copy side of the machine and the other alligator clip to the copy stylus. Attach the other tester's clips to the key blank in the cutter vise and the other to the cutting wheel.

Slowly raise the carriage of the machine until the key blanks come into contact with the stylus or cutter wheel. Whichever light is the first to light indicates where your machine needs adjusting. If the stylus, or copy side lights first, your machine will cut too shallow. If the cutter side lights first, the machine may cut too deep. Ideally, the lights should light simultaneously.

If you move the carriage to the left or right, both lights should stay lit as the stylus and cutter move across the key blank blades. If one or both lights go out or flicker as you move the carriage back and forth, you may have a minor mis-adjustment on your

stylus, uneven wear on your cutter wheel or, the carriage shaft or bearings could be severely worn.

I don't know if there is a commercially made product out there that can do all of this, but if there is, I'll bet you can't buy it for five bucks!

Bob Shearer
Ohio



**SARGENT AND
GREENLEAF WINNER:
Door Hinge
Adjustment**

Here's a quick fix tip for those doors that sag due to bent hinges (and sometimes a bent frame) and is binding at the bottom of the frame or dragging on the threshold at the latch side.

First you need to do a little prep work at your shop. Using a piece of pine or other soft wood, cut several wedge shaped pieces approximately three inches long, about an inch wide and in varying thickness from one quarter of an inch to one half of an inch (see *Illustration C*).

To make a field repair on a sagging door, open the door and loosen the bottom hinge screws that attach to the frame side of the hinge. Close the



SCHWAB CORP.

Fire protection for your vital records.

**It's not safe unless
it's Schwab Safe.**

[Click here for more information](#)

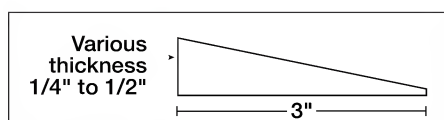


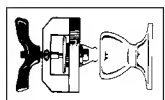
Illustration C.

door and use a large flat bladed screwdriver (on the outside) to open a small gap between the hinge and the frame. Insert one of your wedges and tap it into the gap. Don't worry about hitting the screws. How badly the door is sagging or bent in the frame will dictate how much of the wedge (or how many) you will need to place in the hinge.

Now tighten the screws and close the door to check its operation. If the door swings freely, latches easily and does not bind in any way, break off the excess wedge sticking out from between the hinge and frame and touch up with paint if needed. Occasionally, it will be necessary to shim the middle hinge as well. However, the middle hinge seldom ever needs as much shimming as the bottom one.

This "fix" will not work on every door, but depending on the condition of the door, frame and hardware, it's a good fix for those times that your customer does not want to spend the money for a continuous hinge or a more permanent repair.

Vernon Kelly, CRL
New Jersey



**A-1 SECURITY
PRODUCTS WINNER:
VATS Cylinder
Replacement**

Here's a quick way to replace a VATS cylinder when only the cylinder is bad.

First, remove the cylinder the same way you would remove any GM cylinder. Do not disconnect the wiring. Pull the cylinder out of the column just far enough so that there is no stress on the wiring harness.

You will see a wide plastic ring covering the cylinder and cylinder cap. Gently pry this ring off of the cap. Now the cap will snap off of the old cylinder. Do the same to the new cylinder and then snap the old cap onto the new cylinder, slide the ring back over and reinstall the cylinder in the column and you're done.

I only recommend this procedure when the ears and cap on the old cylinder are in good condition.

Mike Lindemann, CRL
Minnesota



**SILCA KEY BLANKS
(100) WINNER:
Paper Clip Picks**

During a recent fishing trip, our rented cabin came complete with the necessary housekeeping articles, but they were secured in locked cabinets to deter petty thieves. We never determined whether the locks were keyed alike or not, because the keys were fifty miles down the road at the cabin owner's home!

Who takes trade tools on such a vacation? I solved the problem by fashioning various picks out of paper clips that we gathered from our

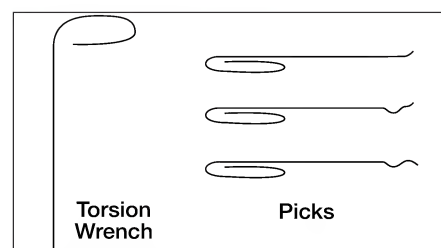


Illustration D.

vehicles, etc. Since these come in different wire sizes they can be easily worked into various shapes and are stiff enough to do the job. Using a pair of pliers from a fishing tackle kit, here are some of the representative shapes,

SRI
SECURITY
RESOURCES INC.

**SRI and Steve Young are
working together to bring
you the best in locksmith
tools and supplies.**

[Click here for more information](#)

including a tension wrench that we made (see *Illustration D*).

Did they work? Two of us opened the front door (a cylindrical lock) and six cabinets in about twenty minutes.

Dick Walter
Texas

Editor's Note: Dick, there seems that there is always a way if we just stop to think about it. You and your fishing partner showed your creativity in true locksmith fashion. But ... did you catch any fish?



**PRO LOCK PK 15
PROFESSIONAL PICK
SET WINNER:
Cylinder Rotation
Limiter**

There are many situations where it is necessary to restrict the movement of the cam on a mortise cylinder. Here is one solution that is easy and effective.

Simply drill one or two holes (as required) with a 1/8" bit about 1/4" deep in the back of a mortise cylinder and insert a 1/8" x 3/8" roll pin where needed (see *Illustration E*). You could use a drop of glue to further secure the roll pin, but it probably won't be needed.

Nasir
Pennsylvania

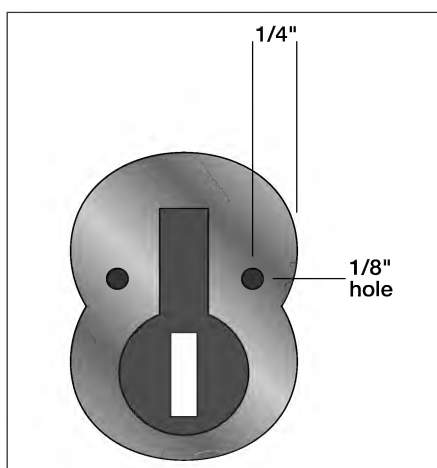


Illustration E.

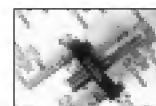


**TECH TRAIN TRAINING
VIDEO WINNER:
Stir Stick Alignment
Tools**

I work on more Kwikset locks than anything else and sometimes have trouble getting the screws to line up with the holes when I reinstall the locks on the door. I overcame this problem by keeping a supply of coffee stir sticks in the van. I insert one stir stick in each screw hole in the lock and then slide the inside knob over the stir sticks and spindle. I remove

them one at a time and insert the screws. Works every time.

James L. Hall
South Carolina



**SIEVEKING
PRODUCTS GM E-Z
WHEEL PULLER
WINNER:**

Tripping the Thumb Turn

A recent call was to open an aluminum style door with an electronic latch mechanism on it. Although there was an Abloy keyed cylinder, no one had a key capable of operating the lock.

After evaluating the situation I felt the easiest way to open the door was to trip the inside thumb knob. To do this, I twisted and reshaped a wire pick and after inserting it between the doors, I was able to pull down the internal handle and gain entry.

J. Hastings
Ireland



**MAJOR
MANUFACTURING
PRODUCTS
WINNER:**

Simplex Unican Combination Retrieval

I would like to share with you my

Continued on page 108



STRATTEC™

It's your reputation.

Trust the original.

[Click here for more information](#)

Continued from page 106

method of finding a lost combination on a Simplex Unican, rather than setting it to. In the instance that you are called out to a job site that has four Simplex Unicans on the same combination and you are asked to change them all, don't dismantle all four, just take one apart, decode, and change the rest on the door. Here's how:

- Remove the combination box from the unit.
- Remove the cover. Observe the wheel gate positions.
- Note the gates set on 0 (in line with fence).

- Note the gates farthest from the fence (this is your first number).
- Note the next gates closest to the fence (this is your second number).

Continue in this manner until you have all your numbers. Any gates that are the equal distance from the fence are numbers pushed at the same time. Any gates that line up with the fence when the unit is cleared are zeroed.

This method can be much quicker than taking silly little clips off and you can't drop parts you haven't removed.

"Whit" Whitney
British Columbia



ASP Covers the World of Auto Locks

[Click here for more information](#)

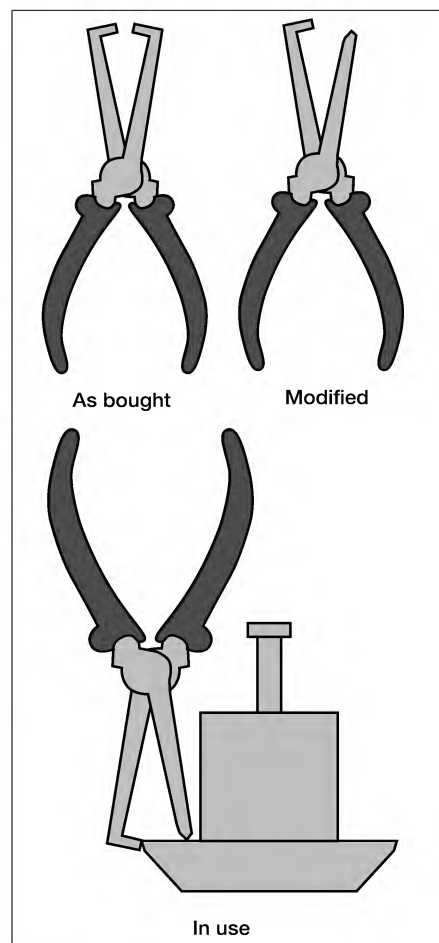


Illustration F.



**SLIDE LOCK'S "Z"
TOOL OPENING SET
WINNER:
Face Cap Removal
Tool**

The other day, I was removing a face cap and broke one tip on my auto lock cap pliers (see *Illustration F*). I ground the broken tip as shown and found that I could remove caps without damage and reuse them.

By using the unbroken side against the edge of the lock cap, it will lift the crimped edge without damaging the face of the cap. This is really great when you find out you don't have a replacement cap.

Lucien A. Pelletier, CRL
Missouri



**1995
THE SIEVEKING AUTO
KEY GUIDE WINNER:
Strike Locator**

While installing deadbolts, I found that I had misplaced my strike locator tool. To solve the problem, I used an old 2-3/4" passage latch in my truck and modified it (see *Illustration G*).

After modifying the latch as shown, I slid the latch into the edge bore hole,

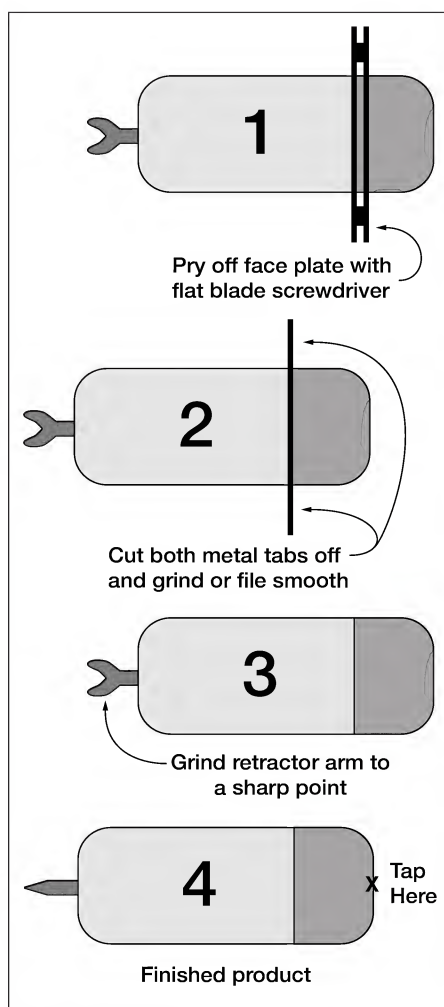


Illustration G.

closed the door, laid a screw driver on the latch and tapped it with a hammer. It left a perfect mark on the door frame. This spring loaded tool works better than the one I lost and it only took a few minutes to make.

Jack Booth
Maryland



**JET KEY BLANKS
WINNER:
Allen Wrench
Turning Tools**

You can create near perfect turning tools from 1/8" diameter Allen Wrenches. Grind the short end of each into a bevel, one at about a 45° angle and the other at about a 60° angle. I made two different sizes, one long and narrow for smaller keyways and one short and wide for the wider keyways.

You don't have to worry about too much side pressure as you would with flat spring tools. Just the lightest touch will exert enough tension to make it pick well. I have found these two little tools to be ideal when picking auto door and trunk locks and

they have also bailed me out of problems with cylinder locks as well.

Jerry Eckhart
Texas



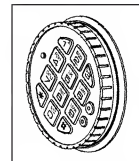
**HIGH TECH
WINNER:
Glove Box
Removal**

On many GM cars that have the sliding glove box lock, you can find all six cuts on the glove compartment lock. The trick is getting the face cap off so that you can access the plug and decode it. The face plate is held on with plastic tabs that sit kitty corner to each other and snap into holes in the lock assembly. If you try to pry these tabs out, you're sure to break them.

Take a junk key blank and drill a small hole. Size it just big enough to fit over the end of the tab, place it on the tab and push down. The tab will

compress and release the cap. After decoding the plug, snap the cover back on and you're on your way.

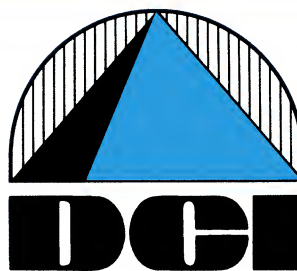
Maurice J. Poulin
Connecticut



**LAGARD COMBO
GUARD WINNER:
Temporary Weiser
Lock Repair**

Occasionally when asked to repair a Weiser knoblock, I find that the key turns properly but the inside knob will not pop out and release. This problem is caused by the spindle hole in the inside knob having excess wear. A quick and temporary fix is to flatten the tip of the spindle with a hammer so that it will fit snugly into the worn spindle hole and then operate the inside knob or button. Chuck Frazier
California

TNL



**Don't panic!
We have Security
Exit Devices.**

[Click here for more information](#)

The National Locksmith's

May 1998 Planning Calendar

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					Lockmasters Course Automotive Opening Nicholasville, KY 800-654-0637 1	Lockmasters Course Automotive Servicing Nicholasville, KY 800-654-0637 Bill Reed Seminar Phoenix, AZ 904-476-2799 2
Lockmasters Course Automotive Servicing Nicholasville, KY 3	Lockmasters Course Advanced Picking Nicholasville, KY 800-654-0637 4	Lockmasters Course Advanced Picking Nicholasville, KY 5	Lockmasters Course Push Button Manipulation Nicholasville, KY 800-654-0637 6	Lockmasters Course Advanced Impressioning Nicholasville, KY 800-654-0637 7	Lockmasters Course Advanced Impressioning Nicholasville, KY 8	9
10 Mother's day	11	12	13	KingAlarm Expo Midwest '98 Livonia, MI 201-488-4990 14	15	MBA Training Lever Lock Picking Nicholasville, KY 888-622-5495 16 Armed Forces Day
MBA Training Time Locks Nicholasville, KY 888-622-5495 17	18	19	20	21	22	23
24	The National Locksmith Closed 25 Memorial Day	26	Lockmasters Course CCTV Nicholasville, KY 800-654-0637 NIBESA's 25th Convention Montreal, Canada 800-843-6082 27	Lockmasters Course CCTV Nicholasville, KY NIBESA's 25th Convention Montreal, Canada 28	Lockmasters Course CCTV Nicholasville, KY NIBESA's 25th Convention Montreal, Canada 29	NIBESA's 25th Convention Montreal, Canada 30
NIBESA's 25th Convention Montreal, Canada 31						



Click here
for more
information

To be a World
Leader You Need
Quality Products,
Innovative
Technology and
Strong Partners.

Advancements In



by Tom Gillespie, CML

AUTOMOTIVE TECHNOLOGY

In the dark, inner cavities of today's cars and trucks, resides more sophisticated and advanced electronics than ever before. Oh, it's visible on the dashboards too, but the real intelligence lies hidden beneath the surface.

As with most computer-controlled machines, most of us will use only a fraction of that machine's ability. While some of the following information may seem a little far-fetched to you, use your imagination to try and figure out the possibilities that this technology offers to the motoring public.

The 1997 introduction of the Cadillac OnStar® system on the DeVille was matched by the Lincoln Town Car's Roadside Emergency Satellite Communications Unit (RESCU®). At first, available on their flagship vehicles only, General Motors has wisely decided to expand the availability of OnStar® to all Cadillac and most Buick, Pontiac and Oldsmobile models. Chevy is sure to follow. Ford will likewise broaden sales of RESCU® to help rescue owners of most Ford, Mercury and Lincoln products. Other auto manufacturers as well as aftermarket companies will want their share of the market too.

Built into the cars, these systems allow the auto manufacturers to offer a wide range of services... at a price. The initial price is currently \$800-\$1000 added to the vehicle cost, but like cellular phones, we should see that cost drop dramatically as more units are sold. Because, like cellular phones,

*Cars and car keys
offer the latest in
technological twists.*

the profit is not in the initial cost, it's in the recurring revenue in the form of monthly charges and per-use fees. Any cell-phone user knows how those can add up!

Read on to see what you can have at your fingertips. Big Brother is not only watching, he rides with you at any hour of the day or night.

WHAT CAN THESE SYSTEMS DO?

CELLULAR PHONE - The cell phone has been around for a number of years and you could get one mounted to the floor or dash of your car. Today's cellular phones are built into the car and eliminate the unsightly 'added-on' look. In addition, microphones are installed and concealed, providing hands-free use of the phone while driving. Voice commands such as "call the office" let the driver keep his hands on the wheel at all times. The cellular phone is a vital link in most of the services described below.

GPS - Global Positioning Satellites (GPS) developed for military use found its way into the private sector. This technology allows instant identification of your geographic position, almost anywhere on the earth at any time. Signals are transmitted to about two dozen satellites orbiting the planet. These

signals are interpreted to recognize the longitude and latitude coordinates and can virtually pinpoint a location. Depending on the variables, a GPS can tell where you are within about 50 feet.

GENERAL ASSISTANCE - On-line help is always available. A live operator answers your call every time. You can use this service to order flowers, change appointments, get addresses and phone numbers or check weather conditions. Any service that you receive by picking up your home phone is available. Can't find the windshield wiper switch? Call the operator for help!

ROADSIDE ASSISTANCE - One of the biggest advantages (according to the seller) is that GPS will allow you to get roadside assistance sent to you, even if you don't know where you are. Roadside help can be in the form of a tow truck or locksmith. If you run out of gas, have a flat tire, or dead battery, you'll get a tow truck. If you lose your keys a locksmith may be sent. But if you lock yourself out of your car, neither a locksmith or towman may be needed (read on).

EMERGENCY HELP - One feature offered is immediate response for roadside emergencies. If you are involved in an accident (and an airbag deploys), it automatically sends an immediate '911' call to the operator. The operator tries to get you through the phone. If an instant response is not received, the police and paramedics are immediately dispatched to your location. Remember, they know where you are at all times. If an airbag is not

triggered, you must push an 'emergency' button on the phone or call the operator manually.

NAVIGATION SYSTEM - If you've ever gotten lost-and are reading this, you eventually found your way home. Navigational systems are available that show you a full color detailed map on the screen and give you spoken directions. Program your destination before you start and the system talks you through getting there, including detours, missed turns and generally ignoring the directions. If you turn right instead of left, or pass up your off-ramp, it will give you new directions to your goal from your current location. Like phones, the first units were installed as add-ons while the current systems have the entire unit built-in to the dash.

VEHICLE LOCATOR - What the GPS was originally used for. Vehicle tracking or locating is accomplished through the GPS navigation system. Teletrac™ and Lojac™ were sold through new car dealers as a way to track a stolen car. The ability to track vehicles was recognized as valuable information for fleets and has been used by companies large and small to keep track of their service and delivery vehicles. This allows companies to schedule and monitor their vehicles to increase efficiency. In the case of a stolen vehicle, either the police track it directly (Lojac™) or the provider tracks it (Teletrac™) and reports location information to the police dispatcher. In either case the car is usually located and recovered much more frequently than stolen cars without such systems.

REMOTE KILL - Recently the possibility to shut the car off was added to these systems. When police are chasing a stolen car, the system operator can kill the engine through keyboard commands. In a dangerous high-speed chase, disabling can be done at a time and place convenient to the police.

REMOTE UNLOCKING - Locked out? Just call the operator with your 'secret password.' When your identity is verified, a command through the cell phone unlocks the doors or trunk. If you are not near the car when you call, a time delay will unlock the car only when you get back to it.

REMOTE DRIVE-AWAY PRIVILEGE - Still in testing stages, this unique feature actually lets you

drive the car away without a key! The vehicle's ignition is programmed with a pre-determined number of starts and shut-offs, bypassing the mechanical components of the lock and key. i.e.: You can turn the ignition on and off up to 6 times in 24 hours. This would allow you the time and flexibility needed to get to your local locksmith and have new keys made.

ON-RAMP TO THE SUPER-HIGHWAY - Still to come is the Internet connection. Microsoft's Bill Gates is interested in hooking everything up together. Instead of just accessing a roadside-service system

operator, you will be able to enjoy full web access as you drive along.

WHAT ABOUT AUTOMOBILE LOCKS & KEYS?

MECHANICAL SECURITY - Changes to lock cylinders have been in the form of split wafers, serrated edges and milled or specialty keys and blanks. Sidebars have come and gone in some cars, and are still here in others.

ELECTRICAL SECURITY - Some keys utilize contacts in an electrical circuit to communicate data between the key and car. If the information is



**HPC has it all:
Key Machines, Software,
Books, Car Openers,
Pick Sets, Tools, Door
Guards, and Key Cabinets**

[Click here for more information](#)

verified, the car is ready to start.

ELECTRICAL RESISTANCE - In the mid '80s General Motors' introduction of the Vehicle Anti-Theft System (VATS) was offered only on the Corvette at first. With various changes, its use has expanded to most GM models in one form or another. Implantation of a resistor pellet in the key shank must match that of the system, or the key turns but the car does not start.

INFRARED SIGNAL - Some keys talk to the car through infrared signals.

These invisible beams of light unlock the car door or open the trunk from a distance and allow the car to be started when the key is used in the ignition.

RADIO SIGNAL - Transponders use a transmitted signal to the cars receiver to verify operation. Data may change. Some systems change or rotate the coded information each time the car is started.

CREDIT CARDS - Used on some show cars, plastic cards unlock and start the car. Swipe your card and

enter your PIN. Card only or both card and code number may be required.

BIOMETRICS - Biometrics in our case can best be described as the use or interaction of your body (biology) to verify or actuate an electronic device. The characteristics of your voice, hands and eyes are as individual to you as your fingerprints. The technology to develop systems using digital voice recognition, hand geometry verification and retina scanning is already available, and has been for a number of years. Although currently the use of biometrics is seen mostly in government and high security industrial situations, it is being tested by some European auto manufacturers on the show circuit. Reaction from the public has been mixed.

WHERE DOES THAT LEAVE US?

Thankfully, you can still make a profit from cutting basic automotive keys. However, if you invest in the knowledge and equipment, you can usually make a bigger profit by cutting specialty and high-security keys.

The point is that we will see the ordinary mechanical key become less and less important in the daily operation of your car. In fact, an unofficial goal of Mercedes' parent Daimler-Benz AG, is to offer the world's first truly 'keyless' production automobile around 2001! Current models utilize a large plastic key fob that fits into a receptacle on the dashboard. Electronics verify the match, unlocking the steering and enabling fuel and starter. The infrared keyless entry and alarm system are built into the key fob. Mechanical lock cylinders have been eliminated from the doors. Owners have to turn the 'key' to start the car, but in the future the car will start with the push of a button.

Good old metal car keys haven't disappeared yet, but we have seen some tremendous changes in the mechanical and electronic fields related to them. Will car keys ever go away completely? No, probably not. At least not in our lifetime. If you think back to the late '70s and early '80s when electronic and electromagnetic locks first started to appear on commercial building doors, we locksmiths heard repeated refrains of "And pretty soon keys will become obsolete." Right, and computers will result in a paperless society. **TRIL**



**LOCKMASTERS
SECURITY
MANAGEMENT**

TM



**LOCKMASTERS
SECURITY
MANAGEMENT**

TM

*Click here
for more
information*

Providing
quality tools,
parts, and
service
for the
security
professional.

The LIGHTER Side

"HELP WANTED!"



by
Sara
Probasco

Spring again! Time to hire and train a couple of new employees before the annual surge of the mad key-tossers begins.

Every year about this time tourists begin trickling in from parts unknown to view the sparkling rivers in the hill country, north of us. They descend upon us in any of a variety of vehicles ranging from luxury RVs to mountain bikes, and are piled high with camping gear, cooking gear, lawn chairs, and inner tubes, ready to knock heads with the great outdoors.

Spring and Summer in this part of the country generally requires a full staff of personnel for us to cover all the bases. As one of our employees had recently moved to North Carolina, we were one man short going in, which was not a good position to be in.

"Well, we'll just have to put out the word and find somebody who's a fast learner," Don said.

Easier said than done, I thought.

"Someone who's honest, dependable, trustworthy, and doesn't mind long hours and hard work."

Sure!

"Didn't you forget something?" I asked.

"What's that?"

"Wouldn't it be nice if the Boy Scout you just described was independently wealthy?" I added.

"Well, it wouldn't hurt," Don admitted with a grin.

We spoke to several of our friends who were in business, and mentioned that we were looking for a couple of employees. We then dusted off our application forms and began to think specifically about what we needed in a new worker.

The man we were trying to replace was adept at bookkeeping and computer

work, in addition to pulling his weight in the shop and on service calls — not an easy combination to find.

We decided to focus on out-of-shop service because that was the area that we needed the most help.

"Here," Don said, proffering a couple of hand-written pages beneath my nose. "I've drawn up a qualification test for prospective employees. I want to be sure they can reason out simple problems, add and subtract, and make change for customers before we hire them." He laid the papers on my desk.

"I was talking to Frank Milburn this morning and do you know they hired and fired forty-three high school graduates over a six month period last year?"

"What in the world...?"

"Frank doesn't have computerized cash registers, and not one of them could make change! Can you believe it? That reminds me" He picked up one of the pages to make some more notes at the bottom. I'm going to include having them look up sales tax on the chart. You'd be surprised how

many people have trouble with charts. I also want a sample of their handwriting, and their printing."

"What are you going to do, have it analyzed, to discover potential personality problems?" I asked.

"I just want to be sure I can read it!" Don replied.

After we had received a few applications we started the process of reference checks. We inquired among a few friends who have lived in this town most of their lives. After living around here for so long they had come to know just about everyone. Two candidates seemed personable, and their work references checked out, but neither one seemed very sharp to me. I was interested in the comments we received from those who had known them for a long time.

"Do you think these people are trainable?" we asked. "We'll appreciate any information you can give us."

"Well, I must admit, he's not the sharpest knife in the drawer," one said.

"If you ask me, he has a room-temperature IQ; he appears to be playing with a full 6-pack, but he lacks the plastic thingy to hold it all together," someone else said.

"She's nice, honest, so far as I know, but I always suspected she waded into the gene pool when the lifeguard wasn't watching," was a comment about another.

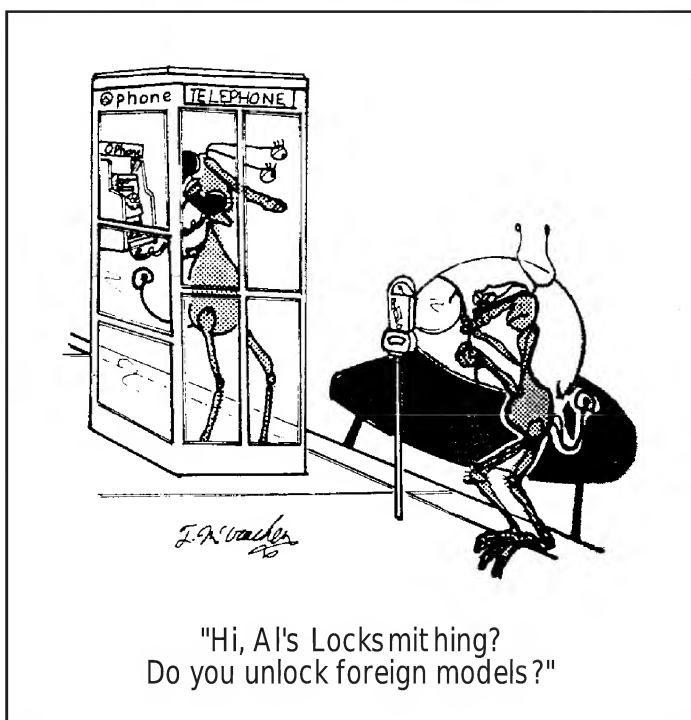
The comments kept coming:

"This is a prime candidate for natural deselection."

"He's about as bright as Alaska at midnight in December."

"She's so dense, light bends around her."

There was something about all these comments that



seemed familiar. Clever, but cutting, these were not the kinds of remarks my friends usually made about others. Besides, I had a nagging sense of having heard them somewhere before. On a hunch, I checked my file of funnies from FAX and Internet sources. Sure enough, there was the complete list, titled "Some Useful Phrases, Comments Made On Military Efficiency And Fitness Reports." I read on.

If brains were taxed, he'd get a rebate.

This man is depriving a village, somewhere, of an idiot.

His men would follow him anywhere, but only out of curiosity.

I would not breed this person.

He has the wisdom of youth and the energy of old age.

She carried out each and every one of her duties to her entire satisfaction.

He would be out of his depth in a parking-lot puddle.

This young lady has delusions of adequacy.

Since my last report, it appears he has reached rock bottom and has started to dig.

She sets low personal standards and then consistently fails to achieve them.

The gates are down, the lights are flashing, but the train isn't coming.

Well, I said to Don later that evening that I guess our litigious society has made us all afraid to make direct statements about anything, for fear of a law suit. Everything has to be a joke, a tongue-in-cheek slur, or an indirect comment, these days.

"True," Don said. "The main thing is, to keep our sense of humor about life in general, and specifically about our own selves. As for me, I can equate very well to several of these phrases. In fact, I'm beginning to relate too well to one, in particular," he admitted as he kicked back in his recliner and reached for the remote TV control.

"Oh? And which one is that?"

"More and more, I find myself developing the wisdom of youth and the energy of old age!"

Well, at least he didn't mean the one about depriving a village somewhere of an idiot! **TNL**



Every Installation
Is a Self-Portrait
Of the Person
Who Did It.
Autograph Your
Work with
Excellence.

[Click here for more information](#)

THRU THE KEYHOLE

A Peek at Movers & Shakers in the Industry

ATTENTION MANUFACTURERS AND DISTRIBUTORS:

Would you like your company and products to be profiled in *Thru The Keyhole*? Please call Editor, Greg Mango, at (630) 837-2044.

M.A.G. Engineering and Manufacturing Co., Inc. **Providing Barrier Security Hardware for the Locksmith Industry**

In 1971 Howard Allenbaugh, founder and president of M.A.G., created a whole new product category — door security reinforcement hardware. To save existing doors when older-style locks were replaced, he invented a u-shaped metal channel that encased the door, lock and latch into one solid unit. Allenbaugh quickly recognized a second application for the new product. The device more than doubled the strength of these doors and their locks.

Today, M.A.G. offers a considerably expanded line of security hardware for doors, door jambs, windows and patio doors. The company believes that its continued growth is directly related to developing successful merchandising tools that help increase the profitability of locksmiths. The most recent example of this forward-thinking philosophy is the introduction of a computerized display system of plan-o-grams called Pegman™.

Pegman provides locksmiths with a competitive edge by improving the way M.A.G. Security products are displayed on their pegboards. By organizing displays to take full advantage of every

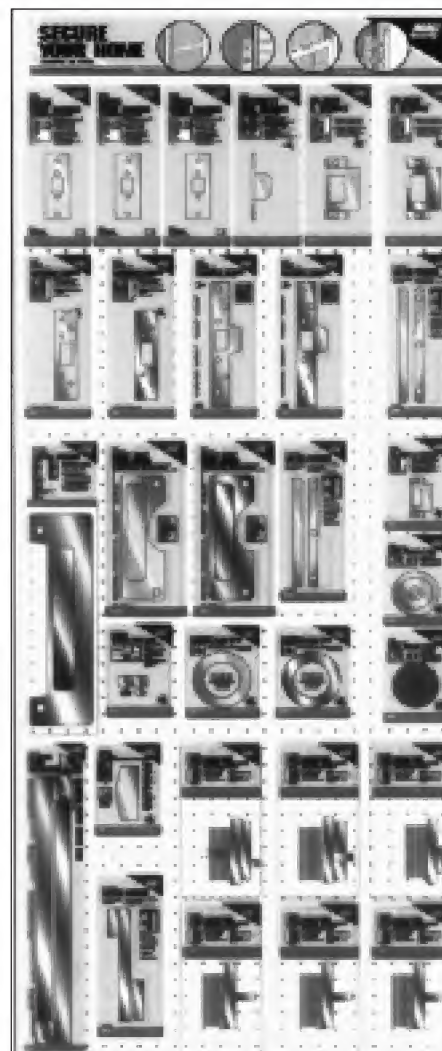
square inch, sales can be maximized and wasted space eliminated. The innovative program assists in presenting a positive storefront look that is more inviting to walk-in traffic. An appealing display can easily turn a \$1.50 key sale into a \$30.00 purchase as customers realize there are other items they may need.

The new program truly represents a team effort between the manufacturer and the involved locksmith distributor. Products are selected based on M.A.G.'s history of knowing what sells and the distributor's expertise on what is popular in his or her specific marketplace. After receiving input on the width and height of the available space, M.A.G. will custom design a plan-o-gram for a display (typically 2', 4' or 6' but anything in between), side kick, clip strip or counter area. By more effective product placement with Pegman a distributor can consolidate all products for a dealer from an 8' section into a much smaller area. M.A.G. does not charge for its plan-o-gram service and also offers free posters and header signs that can be digitized into the computer program.

Participants in the Pegman display system receive three separate printouts:

1. A color sheet that positions each package.
2. A schematic that shows the location of each product by part number.
3. A summary report listing SKU code, UPC code, item description and number of facings.

As more home centers are moving into the neighborhood, locksmiths are becoming more aware of the need to do a better job of merchandising. Beyond Pegman M.A.G. has developed other tools to assist in this regard. Locksmiths are especially excited about the company's bright new packaging. Highlights on the front include a bold yellow background, color photos and illustrations, and precise features and benefits. The back presents easy-to-follow installation instructions and accompanying graphics. All copy is bilingual (English/ Spanish) for broader reach in Hispanic markets.



In addition, 2' x 2' display board demonstrate the breadth of the M.A.G. line in both storefronts and distributor "will-call" areas. The manufacturer also offers eye-catching point-of-sale signage and literature.

A more user-friendly environment, more frequent turns and increased profitability — all result from aggressive merchandising efforts. M.A.G. is committed to providing strong support in this area.

Further information on Pegman and other merchandising aids may be obtained from M.A.G. Engineering & Manufacturing Co., 15381 Assembly Lane, Huntington Beach, CA 92649-1141, 714-891-5100 **TNL**



Road Rally

A showcase of locksmith service vehicles.

If you think your vehicle has what it takes to be featured here, send photographs and descriptions to:
The National Locksmith, Road Rally, 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861.



Owner: Carlos Ortiz Porto,
Mayaguez, Puerto Rico

Model: 1990
Chevy Astro Van



medeco[®]
HIGH SECURITY LOCKS

**Integrity. Ingenuity....
security solutions.**

[Click here for more information](#)

Road Rally



Owner: C.A. Beamon,
Farmville, NC

Model: 1995 Ford
E150 Van



NATIONAL

AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

www.laserkey.com

Reed Report

In regards to my January column concerning the ownership of a master key system ("Who owns it, the locksmith or the customer?"), I received the following letter from Breck Camp, past president of ALOA.

Dear Bill,

Your reader inquired as to the ownership of master key records. Having spent the past thirty years working almost exclusively with master key systems, I have had this question come up almost weekly. At one point, several years back, we consulted our corporate attorney concerning the matter. He researched the matter and came up with the following points.

1. The bitting lists for a master key system can be likened to x-rays taken by your doctor for diagnostic purposes. They were necessary for him to do his job that you were paying him for, i.e. to diagnose your illness. You were charged for them, but normally would not get a copy of them. If in the future it becomes necessary for you to obtain a copy of them, you may do so, but normally a charge applies for copies of the film. The originals are maintained by the doctor or hospital to protect themselves.

2. A bitting list is a necessary "tool" for the locksmith to be able to perform his required service, that of re-keying the facility. It is a product of his mind and intellect and is, therefore, his property. He is being paid to re-key the building and the design of the bitting list is something he must do to accomplish that end.

3. However, (there always is one) if the locksmith charged a specific fee for the design of the system in addition to the labor charge for the re-keying, then the bitting list is the property of the person charged.

My thanks to Breck for the time he took to send this information. That's what this column is all about.

Q. What is the National Security Institute?

A. Even though I am a part of it, I really don't know how, where, when or why. They sent me a beautiful, certified certificate that states that I have been inducted into the Security Hall of Fame. It is signed by an unreadable signature. There is no address or telephone number on it. Maybe someone out there knows more about it than I do. If so, please let me know, and I'll pass it along. Call me at the phone number below.



Yours For Better Security,

Bill Reed
Bill Reed

Scatter Shooting while remembering . . . Leonard Singer

Q. I am new in the industry and just began to subscribe to *The National Locksmith* about five months ago. I truly appreciate your helpful column in a great magazine. I have been hearing a lot about try-out keys lately, and I was wondering what they are and when are they used?

A. Try-out keys are used to quickly open or fit a key to a lock when other methods are too slow or impractical. Try-outs take advantage of the tolerance within many types of locks so that each try-out key can work several different locks. You can use these on locks that do not impression well, locks that can't be disassembled easily, locks with no codes or wrong codes, locks that have been changed, on night calls when impression marks are hard to see, and on any lock you can't pick.

When ordering tryout keys you should use the following guidelines: Be sure ALL keys are accurately code cut - no duplicates, all keys are nickel plated for long life, all keys have been individually de-burred to work better, all sets have a MINIMUM number of keys to save you time, and ALL sets come with instructions for use.

To save space in this column, I have some general instructions for use of tryout keys, and I will be happy to send them to anyone who desires a set of these instructions for FREE. How's that for a deal? Just call me at 888-801-2003, and I will get these instructions out to you.

Q. What is a "Hook and Probe Set?"

A. These are a set of tools that look somewhat like dentist tools. They are used to retrieve parts, depress lock retainers, remove or set springs, etc. Usually they come in a set with about four or five tools that screw into a handle with a magnet in it. **END**

If you have a question for Bill Reed, would like to talk to him concerning anything in this column, or want to attend a Bill Reed seminar at one of the locations listed below, you may contact Bill directly on his toll free number at: (888) 801-2003.

Apr. 18	Denver, CO	Aug. 1	Kansas City, MO
May 2	Phoenix, AZ	Aug. 15	Memphis, TN
May 16	Indianapolis, IN	Sept. 26	New Braunfels, TX
June 6	Seattle, WA	Oct. 10	Chicago, IL
July 18	Columbia, SC	Nov. 7	Salt Lake City, UT
		Nov. 21	Tulsa, OK

No
Holds
Barred

MECHANICAL SLIDING DOOR LOCKS

by Joe and Dee Bucha

This article will actually be pretty basic, since there are really only two versions of mechanical locks for sliding doors. We'll look at the mechanical locks only in this issue.

Let's qualify one major point when we discuss sliding door security systems, because you will run into it repeatedly. When we discuss sliding door locks, we usually mean mechanical door locks mounted on a door which slides. When you hear the term, "slider" or "locking device" that term normally refers to electrically operated doors which slide back and forth from a remote station. While some of these sliders can be operated manually and all have an emergency key over-ride, the major difference is that sliding door locks are consistently mechanical and sliders or locking devices are electrically operated.

The Folger Adam 30/30D, Southern Steel 1030/1030D and Adtec 4030/4030D, are sliding door locks. The Folger Adam #30 (see *Photograph 1*) has an automatic deadlocking feature, which many of our readers will immediately recognize as meaning it has a slam lock feature: when you slam the door the lock automatically deadlocks. The Folger Adam 30D, however, is strictly mechanically operated. This means that the lock deadlocks and unlocks only by the use of the key (see *Photograph 2*).

Both the 30 and the 30D are paracentric lever-tumbler locks. A quick visual inspection will clearly show the differences between a "sliding door lock" and an ordinary latch/deadlatch, bolt/deadbolt function. The lock is rectangular and clearly taller than it is wide.

The locking system consists of a hook bolt, as opposed to the usual beveled latch or squared bolt we ordinarily see the hook bolt has a 5/8-inch lift, which allows it to be lifted clear of the strike (keeper), in order to unlock the door. The actual locking function occurs when the hook bolt lifts, moves into the strike and then drops down into position, hooking into the keeper, effectively securing the door.

Before we go further, let's have a clear understanding that these locks are rated as maximum security, but I would add a warning. The "maximum security" rating applies to the actual holding power of the lock. These locks weigh about 12 pounds each and the hook bolt is galvanized, 1/2" hardened steel. Remember, however, that when



1. The Folger Adam 30 has an automatic deadlocking feature.



2. The 30D, however, is strictly mechanically operated.

any door is in the unlocked position, it is open, and obviously unsecured. In the case of the #30 slam lock, there is always the off chance the door can be slid shut quickly enough to attain deadlocking in an emergency. The non-slam locking function found on the 30D is not automatic, and therefore, lowers the effectiveness of this lock in an emergency situation. Once in the deadlocked condition they are equally effective for security.

Both the 30 and the 30D locks are commonly found on sliding corridor doors, where one group of cells is separated from another group of cells or

Continued on page 130

Continued from page 128



3. The Southern Steel 1030 has a deadlocking pin (or actuator) and the obvious bevel on the bottom leading edge of the hook bolt.

on entry doors to the cell area. You will likewise find them on runs (halls). You will frequently find #30 deadlocks with slam locking capabilities on holding

Model	Height	Width	Depth
Adtec 4030/4030D	10"	3-1/2"	1-1/2"
Folger Adam 30/30D	10"	3-1/2"	1-1/2"
Southern Steel 1030/1030D	10"	3-1/2"	1-1/2"

Table 1.

cells, because they are intended for rapid response security situations.

The 30D, in our opinion, is intended only for corridors because it does not have that highly needed slam locking capability that is almost mandatory in cell areas, where quick containment can be a necessity.

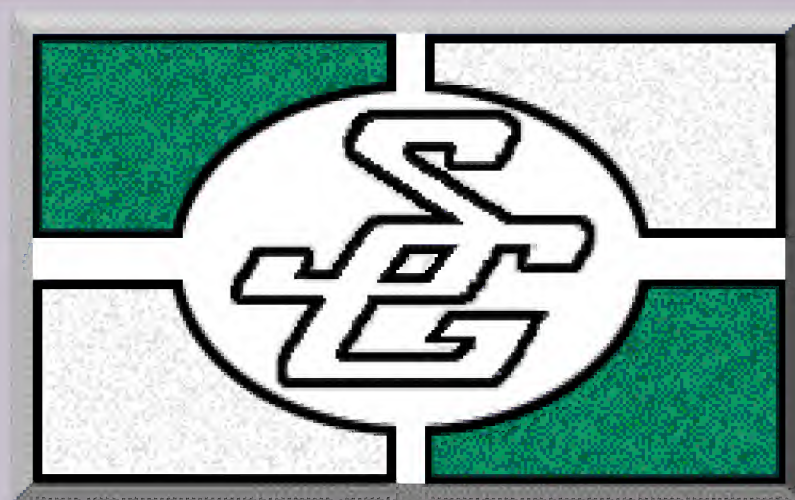
A moment of careful study will quickly show you the difference in the hook bolts between the Southern Steel Model 1030 or Folger Adam 30 and the Southern Steel 1030D or Folger Adam 30D. Notice the shape of the two bolts are somewhat different. The 30 has a narrower look due to a more beveled design (see Photograph 3). The hook is also somewhat "sharper." The "ramp" at the bottom, leading edge of the hook bolt is what allows the #30 to slip easily into the keeper without requiring a key to lift and drop the bolt. The 30D has a very square look, which means a key is required to both lift and drop the bolt (see Photograph 4).

The deadlocking feature on both these mechanical sliding door locks is about as simple as it can get. On the #30, automatic deadlocking is achieved when the hook bolt snaps into place, and that final travel on the door pushes the deadlocking pin against the jamb, causing it to trigger that final positive deadlocking function. On the other hand, the 30D can only be deadlocked with the use of the key.

The measurements on these locks are the same for all manufacturers (see Table 1).

Six-lever versions of these locks can be special ordered and correct handing must be specified. Galvanized finish is an additional option, which makes the lock corrosion resistant. Both versions of this mechanical sliding door lock weigh about 12 pounds.

You will need to know the type of mounting plate you require. This is determined by whether the door is hollow metal, grille or plate.



**Choose S&G Comptronic
electronic safe locks for...security...
technology...tradition.**

[Click here for more information](#)



4. The Southern Steel 1030D hook bolt is squared on the leading edge of the bolt.

Now, Joe wants to talk about some problem areas you might encounter with these locks.

The most ordinary problem you're going to encounter with these locks - either version - is an inmates attempt to "block" the deadlocking function.

We're all aware of the credit card trick for residential and commercial locks which are either installed incorrectly or misaligned. While most jail/ prison inmates don't have credit cards, they do have other tools of the trade - shoestrings, for example.

When a #30 or #30D is not fully deadlocking, the first place you want to look is in the keeper. I'm not going into detail on what you'll find there, but it could be an incredible number of foreign objects. Use a screwdriver to remove any debris in the strike area. I once retrieved a piece of razor blade and plastic from a disposable razor (among other things), and was grateful it fell on my shoe rather than separating me from a finger.

Sliding doors also have tracks, and these tracks are favorite sites for stuffing anything which will help keep the door from fully closing. If the door is not fully closed, the lock will not deadlock, just as when there is not enough travel in an ordinary deadbolt.

In addition to that little problem, ordinary wear can wreak havoc on any metal to metal contact. You'll find a great deal of this in jails and prisons. It is not beyond the scope of ordinary inmate knowledge that

shortening the deadlocking pin on the #30 will keep the lock from deadlocking. Watch for that. It's not necessarily visible to the naked eye. I once had to physically measure various deadlocking pins until I got used to being alert for that problem.

Another trouble spot is misalignment of the frame. Slamming a metal door against a metal frame will eventually create normal wear. If the frame is bent near the hook bolt/strike area, you probably won't attain positive deadlocking. By the same token, if the frame is misaligned for any reason and provides a gap greater than 3/8 of an inch, the deadlocking pin won't provide the needed security.

Finally, watch for wear on the strike. These are not "solid" receptacles. That is to say they are not enclosed receptacles on metal doors. The frames are hollowed out and the hook bolt actually enters the strike and drops down into that hollow area. Metal against metal will create wear...and wear almost always causes problems.

Until next time, we invite your questions. Try us on the net, at either jailock@bcni.net or AmSecDist.com.



SCHWAB CORP.

Fire protection for your vital records.

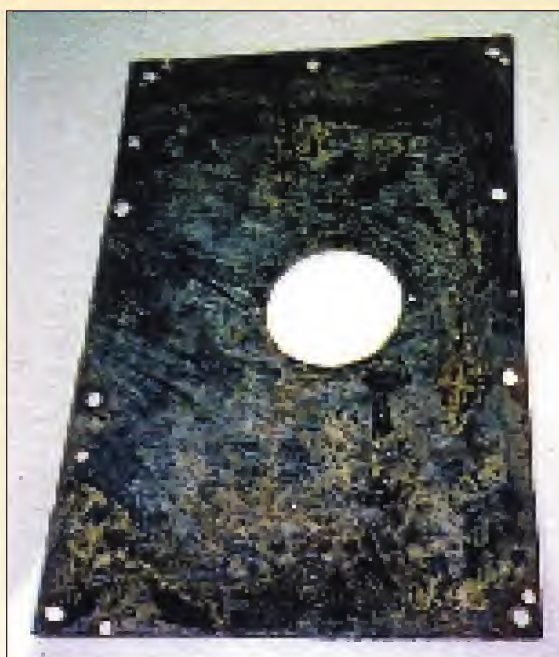
Free freight!!
No middle man!!

[Click here for more information](#)

Safe Restoration

Part 4

by Lynn A. Burman, CPL, CJS



1. The back plate has many more holes in it than we need.



2. The door was first painted and then the stripes put on.

Here we are at part 4 in our safe restoration. We have now finished the body of the safe and will start working on the door. I will start with the back of the door or to be more specific, the back plate. It has many extra holes in it that we don't need (see Photograph 1), so they have to be welded in and ground flat and smooth.

Next sand the edges of the door (the steps) smooth to prepare for primer. Apply the first coat of primer. If you do this while the door is off the safe and laying flat you won't have to be concerned about runs, drips, or sags in the paint. It also allows you to apply heavier coats of paint which makes the color appear deeper and richer.

After applying two full wet coats of primer, fill any pits with glazing putty (just like we did on the body of the safe) this is nothing more than super thick primer, and it dries in about 15 minutes. After it is dry, sand it smooth with 180 grit and reprime. Do this as often as needed progressing to 200, 220, and finer grit sand paper each time until it is as smooth as glass.

Like the body of the safe, the back of the door doesn't have a lot of ornamentation. Begin by

painting the first stripe color over the entire surface. Next apply the striping tape in the size you wish your stripe to be. In Photograph 2, you can see that I painted the back of the door gold and then put on the stripes and laid out some lettering.



3. The tape design was cut and then the main color was shot.

Next I shot the door red and laid some more masking tape on for additional lettering that will

SRI
SECURITY
RESOURCES INC.

SRI and
Tech Train
Productions
are the
automotive
specialists -
your best
source for
automotive
tools,
manuals,
and videos.

[Click here for more information](#)



4. Bondo was applied to almost the entire front surface of the door.



5. Making sure that you have the door absolutely straight, flat, and smooth.



6. Apply the flash coat of primer then follow-up with two full wet coats of primer.

be red after I paint the final color. I then put our logo and date on the back of the cover plate in an inconspicuous place to show that I am proud of what I do and want no question about the fact that this is a restored safe.

To apply the logo I drew it out on the tape that I applied in *Photograph 2*, and then I used an Exacto knife to carefully cut through the tape. If you cut too deeply you may lift the paint when you remove the tape, and repairs, although possible, are a real pain.

Now that I had cut the tape design (see *Photograph 3*), I could then shoot the main door color. If you have let more than 8 hours elapse since you shot the last primer or color you should scuff the surface lightly with 240 grit sand paper or finer so that you get better adhesion. Allow the paint to become almost dry and remove all of the tape.

I then built a frame to set the door in so that when I turned the door over it wouldn't scuff the fresh paint on the back of the door. This can be made out of anything that is available; just be sure that it keeps the back surface of the door from getting scuffed.

As you can see I applied bondo to almost the entire front surface of the door (see *Photograph 4*). This is to give the smoothest surface possible. You then need to make sure that you have the door absolutely straight, flat, and smooth by checking it with a straight edge (see *Photograph 5*).

Apply the flash coat of primer then follow-up



7. Fill any imperfections with glazing putty.

with two full wet coats of primer (see Photograph 6). Allow to dry and check for imperfections. Fill any imperfections with glazing putty (see Photograph 7) and allow to dry. Next sand smooth with 180 grit and reprime. After drying, check for

imperfections and repeat as often as necessary for a perfect finish (use a finer grit of sand paper with each coat of putty).

Now apply the first stripe color (see Photograph 8) and mask off your design (see Photograph 9).



8. Applying the first stripe color.



**The world's
largest
producer of
automotive
locks and keys.**

[Click here for more information](#)



ASP - Your Auto Service Center for the World

[Click here for more information](#)



9. Mask off the design with tape.

Shoot the secondary or an accent stripe color if you wish. Then mask off the secondary stripe

design and shoot the next color. When all accents have been masked off and shot, then shoot the main color. If you wanted to put lettering on the safe or if you wanted to personalize it for the customer you would use the same process as for the logo on the back cover.

Allow to almost dry and gently remove the tape. If some portions of the design are difficult for you to do in the described manner, you may want to do them free hand or subcontract it out to a sign painter.

Well that finishes the door for this month (see Photograph 10). Next time we will work on the door mural. **TNL**



10. That finishes the door for this month.

KEY CODES

1998 Subaru Forester 30001-37850 - Part 1

Key Blanks

Ilco - X251

Ilco/EZ - SUB1

Curtis - DA34

Jet: DA34

HPC 1200CM

Code Card: CF304

Cutter: CW-1011

Stop: Tip

Framon

Cut Start: .337

Cut to Cut: .083

Spacing Block: #5

Cutter: FC-8445

Key Clamping: Tip stop key.

 Align tip of key with left side of
vise jaw.

A-1 Pak-A-Punch

PAK-N4

Curtis

Cam: DM-40

Carriage: DM-41

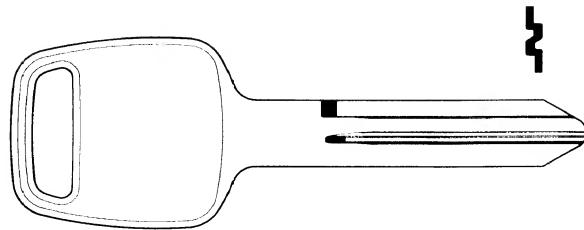
Cut to Cut Spacing: .083

Number of Cuts: 10

 Note: Codes printed bow to
tip.

Key Gauged: Tip

M.A.C.S.: 2


Spacings:

 1= .915 6= .50
 2= .833 7= .418
 3= .750 8= .335
 4= .667 9= .252
 5= .584 10= .169

Depths:

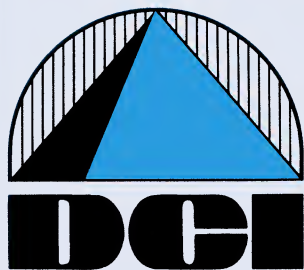
 1= .333
 2= .307
 3= .281
 4= .256

30001	2213122321	30021	3123424321	30041	3322233131	30061	3321312211	30081	2231121331	30101	3123131221
30002	3132134231	30022	3134222431	30042	1124424331	30062	3131122211	30082	3342322121	30102	3324431131
30003	1331123131	30023	3331211331	30043	1331231331	30063	3323422231	30083	3343122131	30103	1123113421
30004	3332123431	30024	1344211221	30044	3133121131	30064	2231222111	30084	1324442311	30104	1123433231
30005	1313421211	30025	1321334431	30045	3343422211	30065	2234332231	30085	1322434431	30105	3343221221
30006	3331122431	30026	2243431211	30046	1344431311	30066	1312333421	30086	3312312211	30106	3134434311
30007	1343443221	30027	2234312431	30047	2233431221	30067	1342134311	30087	2232233431	30107	2212433431
30008	1323323211	30028	3112322311	30048	3132224431	30068	1323344421	30088	3321344311	30108	1124311231
30009	1112434221	30029	3331213311	30049	1313243211	30069	2232344311	30089	2244321311	30109	2223332121
30010	1311232211	30030	3123133221	30050	1122243211	30070	3112431211	30090	2231321131	30110	2211231331
30011	1332211231	30031	2243312231	30051	2224324231	30071	3132122111	30091	2233322231	30111	2242112311
30012	3121244431	30032	3322132421	30052	2231242111	30072	3112443421	30092	2243332231	30112	1123224431
30013	3334443131	30033	1132342131	30053	3322344231	30073	3322434231	30093	1344421211	30113	2231124431
30014	3133112221	30034	1112233211	30054	3122442131	30074	1322244421	30094	3134224431	30114	3113322321
30015	3322113231	30035	3112243421	30055	3311342431	30075	1334322331	30095	3312322331	30115	3342121331
30016	1321243421	30036	2212333421	30056	2231332221	30076	2211132421	30096	1332423421	30116	1322312311
30017	2242242331	30037	2232132211	30057	3124424221	30077	3112423331	30097	3332223421	30117	3122333121
30018	2213221121	30038	1333422111	30058	1124234211	30078	1133123221	30098	1122332331	30118	1132213431
30019	3113233111	30039	1123243421	30059	3123421311	30079	3324234321	30099	3121134211	30119	1311223231
30020	3311322321	30040	3123334431	30060	2243243311	30080	2244233221	30100	3342131121	30120	1324311321



1998 Subaru Forester 30001-37850

30121	3121131331	30176	3342332111	30231	3111233421	30286	3121331331	30341	3122243231	30396	1122434431
30122	1342421121	30177	1321334321	30232	2213313211	30287	3323424321	30342	1331233111	30397	2223131131
30123	1122234321	30178	1344242131	30233	2243243221	30288	1122442111	30343	2221344331	30398	3321324311
30124	1123431231	30179	1334421131	30234	3123123121	30289	1134431121	30344	1133242331	30399	1342321131
30125	3344231331	30180	3324311231	30235	3112443111	30290	1123231121	30345	2223111221	30400	3312234421
30126	3121233211	30181	1323113421	30236	2213424421	30291	3113343221	30346	3112324421	30401	1133442111
30127	1342321311	30182	1124321131	30237	2244231131	30292	1342134221	30347	1322231331	30402	3124332331
30128	1134213431	30183	1132244431	30238	2243224211	30293	3121233321	30348	1332213211	30403	1124244221
30129	2221122311	30184	1343121121	30239	2234243331	30294	1323424211	30349	1133132131	30404	3123324331
30130	3324322231	30185	3112423111	30240	1344321311	30295	3342232211	30350	1132123431	30405	3322213331
30131	1131342121	30186	3323243221	30241	1122332311	30296	1331223231	30351	3311243211	30406	1132122311
30132	2233224421	30187	3122231311	30242	2234443131	30297	2232344421	30352	3113312311	30407	1123432111
30133	2233222131	30188	3132131331	30243	2223443331	30298	3324231221	30353	1133422331	30408	1133312221
30134	3322134331	30189	1332123121	30244	2234231111	30299	1321233221	30354	1124434321	30409	3322213331
30135	1322112421	30190	2243321231	30245	3323122131	30300	1343311331	30355	2221131331	30410	3343121231
30136	2221133421	30191	2243122421	30246	2213442421	30301	1342443211	30356	3321213431	30411	2243423111
30137	2242234231	30192	1124323111	30247	2242134331	30302	2233443321	30357	2213343311	30412	3334224231
30138	1342121131	30193	3331242311	30248	2234212311	30303	1312233231	30358	2242413211	30413	2324232421
30139	3324323311	30194	1132432221	30249	1112312321	30304	3131233131	30359	1332213321	30414	1112224431
30140	2221312221	30195	2243433211	30250	1323443131	30305	3324342321	30360	3312433431	30415	1324434321
30141	2231243431	30196	3311324431	30251	3322422111	30306	3112132321	30361	3342433111	30416	1132121321
30142	1134233121	30197	1324434211	30252	1342243231	30307	1132123121	30362	3123243221	30417	3321312231
30143	2233234231	30198	3121342421	30253	3344231131	30308	2212233231	30363	1324421121	30418	1322334311
30144	2211342321	30199	3312334211	30254	1134212331	30309	3121332231	30364	2234432221	30419	2221313221
30145	2243443311	30200	1324421211	30255	1132434221	30310	3131123421	30365	3321134431	30420	1331244221
30146	3334424211	30201	1124322121	30256	3342313211	30311	3334243131	30366	1132132211	30421	1322134421
30147	3113324231	30202	3123424231	30257	3133112421	30312	1342332311	30367	3124344211	30422	3113422331
30148	1134212311	30203	2231224311	30258	3332432111	30313	1312322111	30368	3134432421	30423	3112313221
30149	3311234431	30204	1313312331	30259	3312322111	30314	1112432131	30369	2242234321	30424	1132422431
30150	1121333221	30205	3331213421	30260	3133424421	30315	3343312231	30370	2242212431	30425	1113232231
30151	3133133121	30206	3311233221	30261	3321243421	30316	2234233111	30371	1323112321	30426	1322133231
30152	2234332121	30207	3322133211	30262	3343213321	30317	3134423221	30372	1123344221	30427	3132243131
30153	1133421321	30208	3121133131	30263	3324223321	30318	2213123221	30373	3321112431	30428	1133311231
30154	3112444321	30209	3132112321	30264	3121334321	30319	2231124321	30374	1124312331	30429	3113343421
30155	1124324431	30210	1133221121	30265	1344332421	30320	3324333111	30375	3112312321	30430	1124223211
30156	1122421121	30211	1122233311	30266	3123322111	30321	2213342121	30376	3133442111	30431	3321243111
30157	1134221331	30212	3113232431	30267	2243123231	30322	1331121221	30377	3324233131	30432	1134432421
30158	1132134321	30213	3324331121	30268	1313221231	30323	1324332111	30378	3312223111	30433	2242432121
30159	1132431231	30214	3321332121	30269	3344333211	30324	3334442231	30379	3322233111	30434	3343423421
30160	1112423311	30215	1343112321	30270	3121344221	30325	3123323321	30380	1311223431	30435	1133434211
30161	2231243121	30216	3312432111	30271	3343321121	30326	2232243331	30381	1333121331	30436	3313423431
30162	2244233111	30217	3131124211	30272	1334334321	30327	3323243131	30382	1124331321	30437	2234224321
30163	1321323211	30218	2212132231	30273	2233211331	30328	3132244321	30383	3322234321	30438	1324433131
30164	3113331231	30219	1311343221	30274	3131232231	30329	3132132121	30384	1334322131	30439	3331122231
30165	1322233111	30220	1342331231	30275	2242234431	30330	1113422421	30385	1321224431	30440	3132112231
30166	3331112221	30221	1133113431	30276	1132122421	30331	3344322211	30386	3131132331	30441	2211244221
30167	1131222331	30222	3112342421	30277	2234433211	30332	3113221211	30387	1332434331	30442	3322123111
30168	3123342421	30223	1113224221	30278	2242334331	30333	2233432121	30388	1324322231	30443	3131224331
30169	1122133211	30224	2234433431	30279	3312343211	30334	1313422111	30389	1333244421	30444	3342433131
30170	3332442211	30225	1332244231	30280	1124433111	30335	3123112431	30390	3112313421	30445	1122233131
30171	1124313321	30226	1113443231	30281	1112334431	30336	1323423421	30391	1342433311	30446	3323312321
30172	1342342211	30227	1123321231	30282	1124323311	30337	1311312331	30392	1124422111	30447	3323122421
30173	2231213331	30228	3132444211	30283	3343211211	30338	1324211221	30393	3344323421	30448	3132134431
30174	2213244221	30229	1113212431	30284	2223334211	30339	1342112331	30394	2213242111	30449	1134223421
30175	1324321131	30230	3123443421	30285	1343342111	30340	3344344231	30395	3133132221	30450	3113222311



*We have it all.
Quality, Value, & Service.*

[Click here for more information](#)



The
Innovation
You Expect,
with the
Flexibility
You Need!

[Click here for more information](#)

1998 Subaru Forester 30001-37850

30451	3122422131	30525	3131233311	30599	1132244231	30673	2243122131
30452	3133212211	30526	1333243321	30600	3133124431	30674	1332332121
30453	2232443331	30527	1334242231	30601	2233111321	30675	1121244431
30454	1344324321	30528	2242443321	30602	1312421131	30676	3132244231
30455	1132322311	30529	2213123331	30603	3322213421	30677	3124343221
30456	1113432231	30530	3132223111	30604	3313123221	30678	1131233311
30457	1311224331	30531	3132221311	30605	3112433321	30679	3124342321
30458	1113234431	30532	2233222311	30606	2244311211	30680	2234432421
30459	1334312211	30533	2212243131	30607	2231133211	30681	2231243211
30460	1132424321	30534	3124432211	30608	1324223431	30682	3124332311
30461	1332421131	30535	2243131131	30609	1321211321	30683	1124431221
30462	3312423331	30536	1332312211	30610	3123444231	30684	1332444321
30463	3322112311	30537	1313223321	30611	3113312221	30685	3134424431
30464	3332443111	30538	3323344311	30612	3323321211	30686	3342242111
30465	3344312311	30539	2243223131	30613	1131223211	30687	3131224221
30466	2244423431	30540	1331311231	30614	1133431221	30688	1112223311
30467	2231221211	30541	2243124421	30615	2221323211	30689	1323343211
30468	3113421321	30542	1324311211	30616	3123132211	30690	3321333221
30469	1321344311	30543	1333223121	30617	2233124211	30691	1312213211
30470	2211331231	30544	1334232331	30618	1332211321	30692	1344321331
30471	1332243221	30545	3334244321	30619	1123234421	30693	1342313321
30472	2212431231	30546	2232434331	30620	1321132431	30694	1124231131
30473	3324422331	30547	3122334331	30621	1311332221	30695	334213431
30474	3133213421	30548	1312322421	30622	1131342431	30696	1312343321
30475	3322113311	30549	3121322111	30623	1322442421	30697	3334221131
30476	3124233421	30550	3112322331	30624	1313321331	30698	3342433421
30477	1323124421	30551	3111244311	30625	1332243331	30699	3323111331
30478	3113432431	30552	1322134331	30626	1112342331	30700	1124423231
30479	2232134231	30553	2243233121	30627	1311224221	30701	2223424231
30480	1133224221	30554	1322132131	30628	3111242311	30702	2213242131
30481	1343442211	30555	1332444231	30629	1133124321	30703	1112342221
30482	3132244431	30556	3332123321	30630	1132311331	30704	3112132231
30483	1121334321	30557	2231321221	30631	2223113311	30705	3113122431
30484	3131221121	30558	1122231331	30632	3112311331	30706	3121123321
30485	2244421121	30559	1132433231	30633	3331221211	30707	3323133211
30486	3113443231	30560	3342442131	30634	2233243321	30708	3344331211
30487	1112343321	30561	3342344431	30635	3322323421	30709	2213431131
30488	3324311211	30562	1342334221	30636	3133233421	30710	3324312331
30489	2213132421	30563	1312432311	30637	3112234421	30711	3121344331
30490	1123122421	30564	2244233311	30638	3334213321	30712	2231242311
30491	3112233231	30565	3113432211	30639	3334442211	30713	2211234211
30492	2213443121	30566	3124431131	30640	3321321231	30714	2224312311
30493	3123124311	30567	3344334421	30641	1332423331	30715	2233113431
30494	1132223111	30568	1313224311	30642	3312312321	30716	1124332131
30495	1321243311	30569	3131122321	30643	2213244311	30717	3343123211
30496	1132443131	30570	1123322421	30644	1334332231	30718	3132133311
30497	1323342331	30571	3312443311	30645	2242312421	30719	1132432421
30498	2232342131	30572	1311344431	30646	1132344311	30720	1321311221
30499	1321332231	30573	1331234431	30647	1343122111	30721	3312312431
30500	3312224321	30574	2242213421	30648	2221331131	30722	1324433311
30501	1342124321	30575	3112312431	30649	2212332121	30723	3321312321
30502	2231132311	30576	1334423221	30650	3344432431	30724	3321342131
30503	2243433231	30577	1323424431	30651	1322334421	30725	1332113221
30504	3123122421	30578	1133444311	30652	1334431321	30726	3331224311
30505	1123224321	30579	1123443311	30653	3132122311	30727	3123422121
30506	3343312211	30580	1313423121	30654	3331234231	30728	2234332211
30507	3331223121	30581	1112333221	30655	3332213231	30729	1311231221
30508	1132421311	30582	2221134211	30656	3312244321	30730	3331244311
30509	3313243211	30583	1323423131	30657	3311312331	30731	1321233231
30510	1313344321	30584	3123323211	30658	1133123421	30732	1112231231
30511	1324443211	30585	1334443111	30659	1134422431	30733	1343312321
30512	2223423131	30586	1124221211	30660	1324432431	30734	3311222331
30513	1342134331	30587	3112113221	30661	3123432221	30735	2213424331
30514	1333443211	30588	1334334231	30662	3324324211	30736	3321344211
30515	1312313221	30589	1123133221	30663	1132311221	30737	3331133211
30516	2232433211	30590	2213223431	30664	3113243431	30738	2232431211
30517	1332133111	30591	3323223311	30665	3312113421	30739	1131334421
30518	2221133311	30592	3311331321	30666	3311323221	30740	2244433221
30519	3311322211	30593	3121333221	30667	3121332211	30741	2223113421
30520	1321321121	30594	2233134221	30668	2243123321	30742	2243323211
30521	1133211221	30595	3331113231	30669	2221134431	30743	3323444321
30522	1123243111	30596	2244313211	30670	3112223311	30744	3324211311
30523	1121231321	30597	3324244221	30671	3121323121	30745	1132342311
30524	1334344221	30598	3343342221	30672	1311312221	30746	3323113311



1998 Subaru Forester 30001-37850

30747	3323223111	30821	2244342211	30895	1344422421	30969	1312313421
30748	1123221131	30822	3312233231	30896	1134344331	30970	3132242431
30749	1323422231	30823	3113343111	30897	3111221231	30971	3311232231
30750	1311322431	30824	2223123321	30898	3122331121	30972	2221131221
30751	1334434311	30825	2242433111	30899	3122244311	30973	3113344211
30752	1124443231	30826	1321223311	30900	2224431131	30974	1344432211
30753	3322211331	30827	3122134421	30901	2233444311	30975	1342423121
30754	3113243321	30828	2233211311	30902	1113223121	30976	1332112321
30755	3322121131	30829	1311243121	30903	3112243131	30977	3342332221
30756	1322324321	30830	1332342331	30904	3332443131	30978	2232442321
30757	1322213331	30831	3111233311	30905	1131244311	30979	1311322231
30758	2223121321	30832	1324331321	30906	3322244311	30980	3111321221
30759	2212343321	30833	3112432221	30907	1332231321	30981	1122134311
30760	3121321121	30834	3313424221	30908	2234221331	30982	3324224421
30761	2223322311	30835	1331321311	30909	1343322331	30983	1132332211
30762	3132422321	30836	3121332121	30910	3133234211	30984	2244331231
30763	1112332211	30837	1322233131	30911	2242243321	30985	3312243331
30764	1344222111	30838	2232232131	30912	3324443121	30986	1133134221
30765	1343342331	30839	1323443421	30913	2242133211	30987	2212132211
30766	3342342211	30840	2242343221	30914	2243133221	30988	1133123311
30767	1343322111	30841	3321342311	30915	3312434221	30989	1313342211
30768	1313322231	30842	2223334431	30916	1323224431	30990	3324343311
30769	2212344311	30843	2244342121	30917	3131244221	30991	1313443321
30770	2224423321	30844	3124312331	30918	1124331121	30992	1342232431
30771	3131223231	30845	1332132121	30919	3322313211	30993	1113322321
30772	1122334311	30846	1124331211	30920	1132332231	30994	3342221321
30773	1313224421	30847	3131131321	30921	3344332421	30995	3312424321
30774	3322243321	30848	1313443231	30922	3132443131	30996	3121132321
30775	1334324421	30849	1333423211	30923	3331242331	30997	3343213431
30776	3313343221	30850	2212334211	30924	1321131221	30998	3322112331
30777	1342212211	30851	2233132421	30925	3123432131	30999	3313224221
30778	3344223231	30852	1132132121	30926	1312231121	31000	1321221131
30779	2213332221	30853	3342212431	30927	1324431311	31001	1342442131
30780	1333222111	30854	3323442121	30928	2233113211	31002	3123122331
30781	3124423231	30855	2231113431	30929	2224443231	31003	1313423211
30782	3344222311	30856	1122431131	30930	3133232231	31004	3133211331
30783	3324334221	30857	2242344231	30931	3112212331	31005	1121324421
30784	3322134421	30858	3311344321	30932	1123422211	31006	3342442111
30785	3124234211	30859	3331112421	30933	3123434221	31007	1333124431
30786	3133434431	30860	1343223111	30934	1123422431	31008	1333443431
30787	3111223211	30861	3123221131	30935	2244323311	31009	3332421331
30788	1131242131	30862	1133212231	30936	1342322121	31010	2213331231
30789	1134421221	30863	1134423311	30937	3334431231	31011	2213134221
30790	1132113421	30864	1324332421	30938	1332443421	31012	3331222311
30791	3323322421	30865	1342431131	30939	3334222431	31013	1134243131
30792	1334342331	30866	3134423311	30940	1133222131	31014	3132223311
30793	3311242131	30867	2232442211	30941	3311322231	31015	2212443311
30794	3123132431	30868	2234223421	30942	3113223121	31016	3132443311
30795	3121131221	30869	3312233431	30943	3334224431	31017	2211223121
30796	3324424331	30870	3334221221	30944	1313211331	31018	1344244311
30797	1132112321	30871	3111334331	30945	2221321231	31019	3334422231
30798	2231134221	30872	2213243121	30946	3112342131	31020	3324344321
30799	2244211221	30873	2242244331	30947	3111234321	31021	1312443331
30800	2234332321	30874	1132221311	30948	1342423431	31022	1334222431
30801	3121324221	30875	3121243421	30949	1334443311	31023	3123213211
30802	3131134311	30876	3334424431	30950	1131244331	31024	3131221231
30803	2212432311	30877	1311223321	30951	3112234311	31025	2231312331
30804	3321344421	30878	3113433221	30952	3312334321	31026	2244324321
30805	3124442311	30879	3112221331	30953	1343123431	31027	3323312431
30806	1124423431	30880	3344324211	30954	1123321321	31028	3122344321
30807	1123213431	30881	2242233111	30955	2232112211	31029	2224331121
30808	2211342211	30882	1323113331	30956	2211334311	31030	1322442131
30809	1311222131	30883	3322111231	30957	1342233311	31031	3122434211
30810	3113134421	30884	3321234421	30958	1321234311	31032	2234233321
30811	1334423131	30885	3122113321	30959	1331122121	31033	1333444331
30812	1324424421	30886	2211224421	30960	2243312211	31034	1321244321
30813	3133243431	30887	1311213421	30961	1343213211	31035	1342422111
30814	2234232311	30888	2231222311	30962	3323243311	31036	2211332311
30815	3122312311	30889	3312221131	30963	3342113231	31037	3313344321
30816	1322132421	30890	2243322111	30964	2213444331	31038	1342323311
30817	3134223221	30891	3342344231	30965	3132134211	31039	3343124221
30818	1342423321	30892	3112133311	30966	2232233231	31040	2213113231
30819	3324423431	30893	3313123421	30967	1344422131	31041	3323121321
30820	1123322331	30894	2212244431	30968	3334423221	31042	1124443211



HPC, Inc.
Designing
Excellence
and
Manufacturing
Quality since
1956

[Click here for more information](#)

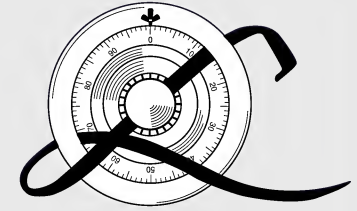


1998 Subaru Forester 30001-37850

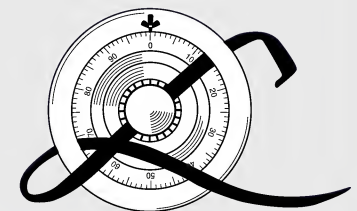
31043	3124331211	31117	1123132121	31191	3343312321	31265	1133422311	31339	3112223421	31413	1342344211
31044	3332121321	31118	2242431311	31192	1121332431	31266	3322443121	31340	3344234211	31414	2231342231
31045	3132212331	31119	1323243331	31193	1312342111	31267	3324223211	31341	2242342431	31415	2231112331
31046	1331224311	31120	1133233111	31194	3322444311	31268	2242344321	31342	1331112331	31416	2233342321
31047	3132432331	31121	1324344211	31195	3123133111	31269	3132431211	31343	3322131121	31417	1322331231
31048	1322423121	31122	1113322231	31196	1342213421	31270	3322123421	31344	2223423111	31418	1132131221
31049	3343243421	31123	2231332111	31197	1323423331	31271	1321321321	31345	3344333121	31419	1133234211
31050	3122312421	31124	1133243321	31198	2242112421	31272	1344331211	31346	3343242231	31420	1343321321
31051	2212134211	31125	2212434331	31199	3124221211	31273	2243331221	31347	3134442321	31421	3332134231
31052	1112223331	31126	3331224221	31200	3133221231	31274	2211334221	31348	1344332221	31422	2224342321
31053	3113232211	31127	1121342421	31201	1132324331	31275	3331243121	31349	1133443211	31423	3111221321
31054	1113424421	31128	3311224331	31202	3112433211	31276	1344332111	31350	3312434311	31424	1342334311
31055	3123223111	31129	3133423121	31203	1123213321	31277	3113321131	31351	1321334231	31425	1331231311
31056	1132213431	31130	3324334311	31204	1333113211	31278	2212123331	31352	1123122331	31426	3342432321
31057	2211133231	31131	2233112221	31205	1334442321	31279	1123444231	31353	1342132221	31427	1331222111
31058	3334424231	31132	3332232311	31206	1331224331	31280	3132124311	31354	2224421121	31428	1343113311
31059	3322332111	31133	3122123131	31207	3344423211	31281	3122422311	31355	1322321331	31429	3123123231
31060	1344423431	31134	1131243121	31208	1323443111	31282	1124234231	31356	1324424221	31430	2223423211
31061	1133231131	31135	3134432311	31209	2242431131	31283	1122131231	31357	2242243121	31431	3112334321
31062	3134212331	31136	2234321321	31210	2221321121	31284	2224332311	31358	1131123221	31432	3322234231
31063	3124223121	31137	3112312211	31211	3112232131	31285	1324321311	31359	2242113231	31433	1333422421
31064	1121343211	31138	3134443131	31212	2223133421	31286	3331134421	31360	3342422131	31434	3312323121
31065	1344333211	31139	2232132231	31213	1124421211	31287	1124211221	31361	1124324231	31435	3132323131
31066	3131123331	31140	1321113331	31214	1344334311	31288	3311231331	31362	2212244321	31436	1132331311
31067	3312342111	31141	1323313311	31215	1122342231	31289	3112333311	31363	3332442231	31437	3332244231
31068	3113222331	31142	2213133231	31216	1124432121	31290	1121322331	31364	1313442111	31438	1113232431
31069	1333112221	31143	2243244211	31217	1342343221	31291	2211222311	31365	3332221131	31439	3132323331
31070	2224334331	31144	3312123321	31218	2221121231	31292	2223323321	31366	3113231131	31440	3132423131
31071	3324221321	31145	2231334221	31219	3133222311	31293	3323423111	31367	1133321131	31441	1112442211
31072	1312334431	31146	3121221311	31220	2213344431	31294	2231231311	31368	2232434311	31442	1134433321
31073	1344311321	31147	3312431121	31221	3311342231	31295	2232332211	31369	3313242131	31443	3121233321
31074	1124221321	31148	1322234231	31222	1113223211	31296	3331212431	31370	3111323421	31444	1322123131
31075	3313311321	31149	1134342311	31223	2233232211	31297	3133443211	31371	2242134311	31445	1324434431
31076	1343221331	31150	1322432231	31224	3321323211	31298	1331324211	31372	2231212211	31446	1342322321
31077	1112313221	31151	1131324211	31225	1342133431	31299	2234342111	31373	3344211311	31447	2213434431
31078	1321133421	31152	3122421121	31226	2243422121	31300	2223311221	31374	3321123121	31448	2234342131
31079	3112122311	31153	3332424431	31227	3342442311	31301	1324432211	31375	2223124311	31449	3124324231
31080	3323343121	31154	1342234321	31228	2223342421	31302	1121344221	31376	1132432311	31450	3324322211
31081	3121334211	31155	1132232311	31229	2232434421	31303	3332342131	31377	3332122311	31451	1121342221
31082	3344242131	31156	3344343221	31230	3134432131	31304	3312242211	31378	3323223421	31452	3122234211
31083	1134432331	31157	3342211221	31231	1134344311	31305	1322231311	31379	1124312311	31453	3313423121
31084	1322342121	31158	2233131121	31232	3331122211	31306	3322111321	31380	1121342131	31454	3323422431
31085	1333223321	31159	1324231331	31233	1112443331	31307	1121243311	31381	3113323421	31455	2221134321
31086	1312234421	31160	2224432321	31234	1134424211	31308	1121331221	31382	1331223211	31456	1343224321
31087	1312444321	31161	3343242211	31235	2224443121	31309	3133432431	31383	2223324331	31457	3332213211
31088	1133311321	31162	3121223331	31236	1124323221	31310	1332312321	31384	3323213431	31458	2234442211
31089	1334233211	31163	2243313311	31237	3134243311	31311	3133234431	31385	3342332311	31459	2234243221
31090	1123244211	31164	1133242131	31238	3334211321	31312	2233212211	31386	1312242211	31460	1342343311
31091	3321122331	31165	1132224431	31239	1342311321	31313	1311342321	31387	3334432311	31461	2233123111
31092	1311224311	31166	1311331231	31240	1131134421	31314	2223432111	31388	1322332311	31462	3334422321
31093	3113212231	31167	2231211331	31241	1332332231	31315	1311222331	31389	3321243221	31463	3133433421
31094	2223124421	31168	1122211331	31242	1113422331	31316	1324334331	31390	2244242331	31464	3131134331
31095	3312232331	31169	1112332121	31243	3113332421	31317	2243324421	31391	2242232431	31465	1311342121
31096	3322434431	31170	1134311221	31244	3332132321	31318	3344234231	31392	2224323311	31466	3312132231
31097	3324332421	31171	1112322331	31245	1113443121	31319	1342242111	31393	3123422211	31467	1132212311
31098	1313324431	31172	3122233131	31246	1323111331	31320	1113334421	31394	2223311311	31468	3344324431
31099	1322123331	31173	3312422431	31247	1133224421	31321	3334231231	31395	3342332421	31469	1133244221
31100	3344322231	31174	3312223131	31248	3342243121	31322	1322442311	31396	2234342311	31470	3122332131
31101	2212434421	31175	1322111231	31249	1322334221	31323	1323423111	31397	3131132421	31471	2213123421
31102	1123134231	31176	2234443111	31250	1333421231	31324	1124344211	31398	3322431221	31472	3321213211
31103	2223123431	31177	1334232111	31251	1313324321	31325	2213312421	31399	1344231331	31473	1342234211
31104	1343242431	31178	1343423111	31252	1331232211	31326	3311232431	31400	3342243211	31474	2244212231
31105	3124442131	31179	1122123131	31253	3343342131	31327	2233113321	31401	1331124321	31475	1331224221
31106	1333423321	31180	2223134431	31254	1133342231	31328	1122444331	31402	1132312231	31476	2243122311
31107	1123342331	31181	3323343211	31255	3321313221	31329	1332132211	31403	3323211321	31477	1122324431
31108	3322331231	31182	2231242131	31256	3343123431	31330	3312231231	31404	3122442421	31478	1322422131
31109	3332232111	31183	3313222311	31257	2244224311	31331	2213324211	31405	2234244211	31479	3321123231
31110	3342231221	31184	3322244331	31258	3342431131	31332	3113113431	31406	3113232231	31480	1343433211
31111	1331133431	31185	3121342221	31259	3321224231	31333	1331234321	31407	2211224311	31481	3323123121
31112	3323324421	31186	3332132431	31260	1323443331	31334	2242432431	31408	1123433431	31482	3322333211
31113	1112223131	31187	3343322131	31261	1124233421	31335	3342134311	31409	1323321231	31483	1332233431
31114	2244224331	31188	1343223311	31262	3312112231	31336	3312442231	31410	3113443431	31484	2234233121
31115	1312343211	31189	3112223111	31263	3134232311	31337	3122321131	31411	3113424421	31485	1331124231
31116	1112234421	31190	3312232111	31264	2212213211	31338	2221322131	31412	1132234421	31486	1123343321

1998 Subaru Forester 30001-37850

31487	1322132331	31561	2212331221	31635	3312124421	31709	2234231121
31488	1313343421	31562	3331124321	31636	3124432321	31710	1122424311
31489	3324233421	31563	1332442231	31637	3311231221	31711	1323213321
31490	1322323111	31564	1334312431	31638	3321113221	31712	3111344321
31491	3134231121	31565	1344433421	31639	1342221321	31713	3112231121
31492	2244231331	31566	1332431321	31640	1344311231	31714	1123442211
31493	1342311231	31567	2212334431	31641	3332432131	31715	3123324221
31494	2211244421	31568	3342311211	31642	3124224421	31716	3313122121
31495	2221334321	31569	3324442221	31643	2243322421	31717	3112342221
31496	2221332321	31570	1113433421	31644	1332231121	31718	1113444221
31497	3111232431	31571	2244334331	31645	2233432431	31719	3311233421
31498	2213233131	31572	1342122121	31646	3321233211	31720	3124433221
31499	3113442221	31573	1324224421	31647	3132123431	31721	1122133231
31500	1331334221	31574	3322321311	31648	3122432431	31722	1112323321
31501	3113132221	31575	1113343221	31649	1132234221	31723	3121234221
31502	3343442431	31576	3123322331	31650	1121134321	31724	3131132131
31503	3324434321	31577	1342242331	31651	2243422211	31725	3311122431
31504	3343112431	31578	2243443131	31652	3313444221	31726	3312231211
31505	1312344311	31579	1332331131	31653	3111331231	31727	1312232331
31506	1311222311	31580	1343242211	31654	1322231131	31728	1312213231
31507	2224434321	31581	3132111331	31655	1131221231	31729	1321343321
31508	2213321131	31582	3112311221	31656	2212442321	31730	1334424211
31509	3112113331	31583	123112321	31657	1323244431	31731	3122342321
31510	3323424231	31584	3311222311	31658	3322332311	31732	3122342121
31511	1124224331	31585	1312224431	31659	1134334231	31733	3122443121
31512	1113243431	31586	1131233421	31660	1333421321	31734	1113443431
31513	3113234211	31587	3331134221	31661	1322344431	31735	1324423431
31514	1113244311	31588	3123321321	31662	3121323321	31736	3112243221
31515	2234434221	31589	2221333421	31663	1122433131	31737	3124431221
31516	2232443421	31590	2243442231	31664	2232112231	31738	3134224231
31517	1134322331	31591	1122113321	31665	2243321121	31739	1131122431
31518	1121332211	31592	2242433221	31666	3112431321	31740	2232334211
31519	1122443121	31593	1324332311	31667	1323342111	31741	1131332221
31520	3123322421	31594	2242134221	31668	3123213231	31742	1331342321
31521	1134233211	31595	3344212231	31669	1121231231	31743	3321243131
31522	3111232231	31596	3323423131	31670	3311232211	31744	3344332221
31523	3332223131	31597	2244334311	31671	3313122231	31745	1343324221
31524	1322331211	31598	2212312321	31672	1324322121	31746	2224434211
31525	1123223311	31599	2212132321	31673	1312442321	31747	3342344321
31526	1344231131	31600	3332132121	31674	3313122321	31748	1344331121
31527	2234244231	31601	1331212231	31675	3112333221	31749	1112422321
31528	1313344211	31602	1122323311	31676	3311134221	31750	1332422431
31529	1322332131	31603	3132442231	31677	1312442321	31751	2232442231
31530	1134424431	31604	2231213421	31678	2223312231	31752	1324424331
31531	1122344431	31605	3131123311	31679	1342223431	31753	3322442111
31532	1311244331	31606	1132134431	31680	1324221231	31754	1331223431
31533	3342233311	31607	1342422311	31681	3323322311	31755	3112433121
31534	2231331231	31608	1134324221	31682	3334232111	31756	3123211211
31535	1313422311	31609	3122433221	31683	2213212231	31757	3124323111
31536	1121224211	31610	1123134211	31684	3112134211	31758	3334234421
31537	1312243421	31611	3133423321	31685	1112332231	31759	3312133421
31538	1321321231	31612	2243112321	31686	3131223211	31760	3343342311
31539	3332242431	31613	3113123131	31687	3313344231	31761	1123313311
31540	1121224321	31614	1132243131	31688	3113432121	31762	3133421231
31541	3343322311	31615	3322433311	31689	2224312421	31763	1332344331
31542	3133234231	31616	1332443331	31690	3313422421	31764	3344334311
31543	1334234421	31617	2213243321	31691	2242334311	31765	3331243431
31544	1332244321	31618	3312134431	31692	3344423431	31766	1124213311
31545	3124312421	31619	3323113221	31693	3113342321	31767	1113332221
31546	3134231211	31620	3323422211	31694	2212233321	31768	1342433131
31547	2231131231	31621	1312421331	31695	1134211231	31769	1343423221
31548	3324324321	31622	1112423331	31696	3123423111	31770	1344421231
31549	1113324211	31623	3323442431	31697	2213424221	31771	3113442311
31550	2234234331	31624	3124343111	31698	3344213331	31772	1332334211
31551	2221333111	31625	3332422431	31699	2244344231	31773	3342331211
31552	2212332321	31626	2221123321	31700	2223442321	31774	1123421131
31553	1344223231	31627	2242332131	31701	1112244321	31775	1133113231
31554	3324342211	31628	1134224431	31702	2233442331	31776	2231311231
31555	3113244331	31629	3133223121	31703	1332232331	31777	2232342331
31556	2212343211	31630	1324332221	31704	3343124311	31778	1113233221
31557	1342111321	31631	1323121231	31705	3131233111	31779	3312443421
31558	3312333421	31632	1333123221	31706	1342312331	31780	331342431
31559	2232112321	31633	3122233421	31707	1123313221	31781	2211132331
31560	3122421321	31634	1131233221	31708	2212313421	31782	2213321221



Lockmasters
has a
44 year
history of
training
security
professionals.



[Click here for more information](#)



1998 Subaru Forester 30001-37850

31783	2213432231	31857	3112244321	31931	3332423131	32005	1113224421	32079	1134244321	32153	3113122211
31784	2244221121	31858	3311134331	31932	1122313321	32006	3133134421	32080	3113124211	32154	3132443111
31785	3111333121	31859	2211212431	31933	1321123321	32007	1344432321	32081	1313442331	32155	1343442431
31786	1312442431	31860	1331124211	31934	2233342121	32008	1122331211	32082	1333124321	32156	1121223131
31787	1332213231	31861	3331211221	31935	2211242311	32009	1133113321	32083	1331123331	32157	1334223311
31788	3324431111	31862	1132423421	31936	3322213311	32010	3123213431	32084	1322133121	32158	1313244311
31789	3334424321	31863	3342323311	31937	2242112331	32011	2223343321	32085	3124331321	32159	1321324311
31790	3132233231	31864	1124423121	31938	1334244321	32012	2244222331	32086	1132344421	32160	3313421211
31791	2213443321	31865	1344332131	31939	3113443321	32013	1342332221	32087	1321233211	32161	1344322231
31792	3121123231	31866	1122344231	31940	3323244321	32014	1134322131	32088	1133442221	32162	3112444211
31793	1132134211	31867	3112434221	31941	1311213221	32015	3123243131	32089	3124333211	32163	2234242211
31794	1321333221	31868	3124311231	31942	1322113211	32016	3324421231	32090	3121243221	32164	2243131221
31795	1343242231	31869	2212432111	31943	2232443111	32017	2233321221	32091	2223323211	32165	1323343321
31796	1344323221	31870	3113134221	31944	3133244221	32018	2224324431	32092	2223431231	32166	2234211231
31797	3113433421	31871	1133223211	31945	1122322431	32019	2232244321	32093	2233443121	32167	3133122321
31798	1312244211	31872	3324421121	31946	3312134321	32020	3113133431	32094	1132342421	32168	1112433211
31799	1342332111	31873	3342231311	31947	2221321321	32021	1312431211	32095	3112443221	32169	2212433321
31800	1322443231	31874	2234423331	31948	1134443331	32022	2211122231	32096	3343244231	32170	3112122421
31801	1324231221	31875	3321321121	31949	1312224321	32023	1331123311	32097	1132432131	32171	1331322221
31802	3122121131	31876	1322121331	31950	3321124421	32024	2233123311	32098	3322132131	32172	2233123421
31803	3342312221	31877	1333243211	31951	1342121331	32025	2213231221	32099	3321332321	32173	1334421331
31804	1324233421	31878	3324321131	31952	1313342121	32026	1331332421	32100	1134344221	32174	3134433211
31805	1324422111	31879	1112324421	31953	2223311331	32027	3312434331	32101	2223122131	32175	2233231221
31806	2224423211	31880	1343422121	31954	3311133321	32028	1333444311	32102	3321211231	32176	3113213311
31807	1321344331	31881	2232132121	31955	1123424431	32029	2232212311	32103	3124421321	32177	3313322121
31808	1134244231	31882	1322444311	31956	3133131121	32030	1332322131	32104	1342343111	32178	3133421321
31809	3344342211	31883	1342131121	31957	3131231311	32031	2243232111	32105	3121233121	32179	1344431131
31810	3123313311	31884	1132223331	31958	3322422131	32032	3124223231	32106	2223324311	32180	3342213311
31811	3134421131	31885	2233442421	31959	1123233431	32033	2234212331	32107	2243443331	32181	1132423111
31812	1324324431	31886	2232213321	31960	1332431121	32034	2243433121	32108	2234311331	32182	1332134431
31813	3132432111	31887	2211344431	31961	3124433131	32035	2244342321	32109	1334311331	32183	1322113321
31814	1122234211	31888	2233134421	31962	2234442321	32036	2243112431	32110	1131222311	32184	3334432421
31815	3331222331	31889	3111223231	31963	3112244231	32037	3311242311	32111	1322311231	32185	1331112421
31816	3323322111	31890	1321122311	31964	1312431121	32038	1342233421	32112	2243332211	32186	2211233221
31817	1321243111	31891	1113322431	31965	1121322421	32039	2212232331	32113	1133442131	32187	1132432321
31818	1133224311	31892	3132434221	31966	3321231121	32040	3344223121	32114	3311132221	32188	3322123331
31819	2224422331	31893	3133124321	31967	1313322321	32041	2242311211	32115	1331331211	32189	3342421121
31820	1334443331	31894	3134231321	31968	2224442331	32042	1113321331	32116	1331131321	32190	3344332331
31821	2244212211	31895	1343243111	31969	3113242131	32043	3321342421	32117	3132443331	32191	3344242121
31822	1343111331	31896	3133223231	31970	1113424331	32044	1343422211	32118	3122132331	32192	2232432311
31823	1124343111	31897	2213224421	31971	1123332121	32045	1333124231	32119	3134213211	32193	2211242331
31824	1332421331	31898	3133124231	31972	2232133421	32046	3311222131	32120	3332224431	32194	3332113421
31825	2231133121	31899	2223122111	31973	2244221211	32047	3124442331	32121	3343213211	32195	2244232211
31826	1344233421	31900	3124431311	31974	3342234321	32048	1343342311	32122	1334231321	32196	3312344331
31827	3131134421	31901	2231324231	31975	3342133121	32049	1333112311	32123	1131242131	32197	1134331131
31828	3342332131	31902	3331212211	31976	1112233321	32050	1332312231	32124	3112224321	32198	1132123321
31829	2213123131	31903	3112221311	31977	1312221311	32051	1112432311	32125	1124423211	32199	1334213211
31830	3112331331	31904	3323122111	31978	3122334311	32052	3323244231	32126	2232431121	32200	1132443111
31831	3321233321	31905	3113324431	31979	2212331331	32053	3122344431	32127	1342442111	32201	1122342431
31832	2243342311	31906	3344311211	31980	3342423121	32054	3134234421	32128	3124324321	32202	3123442321
31833	1344233111	31907	2243233231	31981	1113244331	32055	1122323421	32129	3321312431	32203	1311223121
31834	1323123321	31908	3311321331	31982	1133312311	32056	3323344221	32130	3111222311	32204	3322422311
31835	3313324321	31909	1343443111	31983	2233442221	32057	3123243111	32131	3124343311	32205	3313423211
31836	1312321321	31910	1113213331	31984	3134243331	32058	1113243121	32132	3133242111	32206	3324213421
31837	1321134321	31911	1134421131	31985	1122321331	32059	2212211321	32133	1312311331	32207	1124344231
31838	1331132131	31912	1311343311	31986	2233421121	32060	1132324311	32134	1322344211	32208	1323123231
31839	3112133221	31913	2212442231	31987	1331231131	32061	1134233431	32135	2244223231	32209	3321322331
31840	3121224321	31914	3321122421	31988	2243422431	32062	2224424311	32136	3342323421	32210	2224344211
31841	2224331211	31915	1322434321	31989	2223442121	32063	1311242131	32137	3313422111	32211	1342432211
31842	1342342121	31916	3311331231	31990	3344421231	32064	2213211221	32138	1313444221	32212	2242213311
31843	1123432221	31917	3332434311	31991	1123422121	32065	2243312431	32139	1131331231	32213	1112232311
31844	3132224321	31918	1324231131	31992	2224421211	32066	3131122431	32140	1112431321	32214	1334234221
31845	1311234321	31919	1343313311	31993	2213442221	32067	3344311321	32141	2211342431	32215	1131132221
31846	3334422121	31920	2243313221	31994	3331121221	32068	3133442131	32142	3311134421	32216	1324233131
31847	1124221121	31921	3112123431	31995	3321333421	32069	3344234431	32143	1343243421	32217	2243231231
31848	1321342421	31922	1332134321	31996	3323321121	32070	3344223211	32144	3321224211	32218	1113231221
31849	3121133311	31923	3324423321	31997	1121223331	32071	1311323311	32145	3332233211	32219	1121321321
31850	3124244331	31924	3113123421	31998	3123234211	32072	2243132231	32146	3113223321	32220	1313423321
31851	2234433231	31925	1134312231	31999	1331113231	32073	3122312331	32147	3112112431	32221	3322312421
31852	1342331321	31926	3134224211	32000	2232334431	32074	1121322311	32148	3343344221	32222	3313243431
31853	3312433211	31927	3343443311	32001	2244324431	32075	1123244431	32149	3334434421	32223	3123332121
31854	3113124321	31928	3134432221	32002	1322433131	32076	1131322431	32150	3321221331	32224	3111224331
31855	2243432111	31929	1132124311	32003	2233132221	32077	2232344221	32151	1324442131	32225	1343224231
31856	3121123121	31930	1333221231	32004	1311332421	32078	3123324311	32152	3124244311	32226	2212244211



1998 Subaru Forester 30001-37850

32227	1313222311	32301	1123223421	32375	3122434321	32388	3121223111	32401	1334422431	32414	2234422431
32228	2243242231	32302	2221133131	32376	1332422121	32389	3131223121	32402	3133112331	32415	3322132111
32229	1312443421	32303	1122342121	32377	3123443111	32390	3134443111	32403	3124234431	32416	1344423121
32230	3311122321	32304	3122124431	32378	2244233421	32391	3113322211	32404	2231122231	32417	2213242311
32231	1113422131	32305	1312423111	32379	1324431331	32392	3342321331	32405	3322432431	32418	1124233311
32232	3321123431	32306	3313312421	32380	3312431321	32393	1324323421	32406	2223112321	32419	1334432221
32233	2243233211	32307	3313443211	32381	2211234431	32394	2233311321	32407	1132443421	32420	1333242311
32234	1342233221	32308	1331243231	32382	2212312211	32395	1321322111	32408	3312421311	32421	2221332431
32235	1123431211	32309	1313213221	32383	1131322321	32396	2213221211	32409	2243332121	32422	3322343111
32236	3323121121	32310	1121132231	32384	1342234231	32397	3331124431	32410	3343213231	32423	3344323221
32237	1344433111	32311	3121133221	32385	2213124321	32398	1324323111	32411	1112234331	32424	1332124421
32238	1321113221	32312	3324424311	32386	2243133111	32399	1324433111	32412	2233312421	32425	3123223311
32239	3122321331	32313	3332231231	32387	3324342231	32400	2243213321	32413	2243244231	32426	1112234311
32240	3342334221	32314	3121234331								
32241	3121334231	32315	3343223131								
32242	3322432121	32316	2212331311								
32243	1133424331	32317	1342443121								
32244	3334423131	32318	1321244211								
32245	1331342231	32319	2221344311								
32246	2231334311	32320	3324322121								
32247	3111332221	32321	1323344221								
32248	3344311231	32322	1332432421								
32249	3123131131	32323	2224333121								
32250	2213122211	32324	3122133321								
32251	2211344231	32325	3112232331								
32252	2211223431	32326	1312213321								
32253	1332221131	32327	1122443321								
32254	2242113321	32328	1332223421								
32255	1122432121	32329	3113322121								
32256	3311123331	32330	3122123111								
32257	1342422331	32331	1131133431								
32258	2211322231	32332	3124334311								
32259	1323122421	32333	1331211331								
32260	1132443331	32334	3123113331								
32261	3312424431	32335	1324431131								
32262	1133122231	32336	3123344221								
32263	3113433111	32337	2234233431								
32264	3312342331	32338	2233244311								
32265	1312233321	32339	2243213211								
32266	1112324331	32340	2242342121								
32267	3331124231	32341	1311324231								
32268	3134424231	32342	1322423431								
32269	2243311221	32343	2223322111								
32270	2221322111	32344	1133423211								
32271	1344421321	32345	3134221311								
32272	1132344221	32346	1122324321								
32273	3322421121	32347	1332221311								
32274	1124442111	32348	1333424421								
32275	2221342421	32349	1132442211								
32276	1134243111	32350	1133321221								
32277	2221334231	32351	2234233231								
32278	2231224421	32352	3122231331								
32279	3124231131	32353	1344432121								
32280	3323422321	32354	3112113421								
32281	1121122421	32355	1123443221								
32282	3131133211	32356	2243334211								
32283	1131123421	32357	3324332311								
32284	3123324421	32358	1123344331								
32285	1113323421	32359	3123233231								
32286	1124431131	32360	1334231231								
32287	1112213231	32361	1123432131								
32288	1334224321	32362	3321113421								
32289	3321344221	32363	1334433231								
32290	2243132121	32364	1322422311								
32291	3112231211	32365	1122443231								
32292	1312423311	32366	2213422421								
32293	1134242211	32367	1121223311								
32294	3332122331	32368	3123344421								
32295	3122231131	32369	2244331121								
32296	1132432331	32370	2221121321								
32297	3124211331	32371	3342442421								
32298	3334232311	32372	3342122431								
32299	1131223121	32373	1331321331								
32300	1311342431	32374	3133442311								



Installation Tools

The Professionals Choice

[Click here for more information](#)



1998 Subaru Forester 30001-37850

32427	3133132131	32501	2242243211	32575	1124433421	32649	3343324221	32723	2212342111	32797	3323112211
32428	1323421131	32502	2231322321	32576	1122121331	32650	3323124311	32724	3123224211	32798	2213133121
32429	3123243311	32503	3122442311	32577	1322321311	32651	1122243431	32725	3332443221	32799	2244432211
32430	1333112421	32504	1131124321	32578	1332442121	32652	2243133421	32726	3113421211	32800	1332342421
32431	3321334231	32505	3112212311	32579	1121244231	32653	1121323321	32727	1342211331	32801	1323213431
32432	1332232311	32506	3113233131	32580	1333424311	32654	2223431211	32728	3332431211	32802	3312313311
32433	3133211221	32507	3331232211	32581	3312334231	32655	1344213331	32729	1321123211	32803	3322444221
32434	1342122431	32508	1121323211	32582	3132123121	32656	3344342231	32730	1312244231	32804	3324221121
32435	3133211311	32509	3322311231	32583	1312343121	32657	1322234211	32731	1332223331	32805	1133211331
32436	1313223121	32510	2242233131	32584	2243124221	32658	2221113331	32732	1123123431	32806	3124424421
32437	1123233211	32511	3123432111	32585	1344242331	32659	3134243111	32733	1112344421	32807	1323121321
32438	2221123121	32512	3321343211	32586	3131243121	32660	3331122121	32734	1133122321	32808	1133221211
32439	3343323121	32513	3123124221	32587	3124322231	32661	3312433231	32735	1343244231	32809	1331321221
32440	3343111331	32514	3312231121	32588	3311323421	32662	1323431311	32736	2221343211	32810	2244221331
32441	3113222111	32515	3124434321	32589	2232113331	32663	3133423231	32737	1122323111	32811	2223313421
32442	1123421331	32516	1342312311	32590	1342133231	32664	1343423131	32738	3132234311	32812	2223113221
32443	1123324311	32517	1332431231	32591	3332243221	32665	3312243131	32739	2231133321	32813	3122424311
32444	3311332311	32518	3113223231	32592	1124424421	32666	1132244321	32740	2243442431	32814	3122132111
32445	1121324311	32519	1121221331	32593	2213332131	32667	2213433131	32741	1322424311	32815	3131132311
32446	3132421331	32520	3322311321	32594	2232342111	32668	3322431331	32742	3342233111	32816	1113433221
32447	1324223211	32521	2242432231	32595	3113221231	32669	1344212211	32743	2223344421	32817	1132133131
32448	1311333211	32522	3132124421	32596	1134231121	32670	1134243221	32744	3111342231	32818	3122342231
32449	3332434221	32523	1344223211	32597	1112331331	32671	3323122131	32745	1133442331	32819	3122133431
32450	2224311211	32524	3124332221	32598	2213432431	32672	2234431211	32746	1313221211	32820	3111344231
32451	3131121331	32525	3321312231	32599	1343442121	32673	1342123311	32747	3112332431	32821	1312422431
32452	3134223331	32526	2231312221	32600	1134234421	32674	3324322321	32748	1132421331	32822	1342432231
32453	3123134211	32527	3124223211	32601	2224332131	32675	3323123121	32749	3321133221	32823	1322433311
32454	3321243331	32528	3112332121	32602	1333244221	32676	3343112231	32750	1333223211	32824	3324433221
32455	1123223111	32529	3134434421	32603	1312432331	32677	1322131231	32751	2244221321	32825	1133432211
32456	3134424211	32530	3312234221	32604	2213211331	32678	1323243111	32752	2212311331	32826	1322424421
32457	1323122311	32531	2234322131	32605	3322244421	32679	1324443121	32753	1311334331	32827	3344243121
32458	1312234331	32532	1134422211	32606	1132234311	32680	3342324431	32754	1124332331	32828	1122442331
32459	3334213231	32533	2211233421	32607	3312443221	32681	1332112431	32755	1324331211	32829	2234223311
32460	3342113211	32534	1122312421	32608	3321243311	32682	3111233221	32756	3133122231	32830	3312431231
32461	2233244421	32535	1133132421	32609	3312421111	32683	2242331321	32757	1132243221	32831	3343423311
32462	1134321321	32536	3123122131	32610	2231122121	32684	2213232211	32758	3113112421	32832	1321244231
32463	2223123121	32537	3113244221	32611	3113224421	32685	3342124321	32759	3124331121	32833	1343213321
32464	3323443311	32538	3344422111	32612	2213221231	32686	3122431131	32760	1322431131	32834	1312342421
32465	3321231321	32539	3113442331	32613	3343113221	32687	1121132431	32761	1132213231	32835	1334243131
32466	2243321211	32540	3123421131	32614	2213244331	32688	1344312331	32762	2243423331	32836	1332432111
32467	3322344431	32541	1342232231	32615	3321322311	32689	1123233231	32763	3111323311	32837	1334233321
32468	1333124211	32542	2212342421	32616	3113124431	32690	1311322321	32764	3323423221	32838	3312443111
32469	3332423111	32543	3133443231	32617	1321124421	32691	3134244211	32765	1113423211	32839	3313421231
32470	2231211221	32544	2244421231	32618	3321342111	32692	3112213211	32766	1122343221	32840	1124434431
32471	1321323321	32545	3121243111	32619	2242333211	32693	1131322121	32767	3343423131	32841	2244322431
32472	1121234311	32546	3113342431	32620	1123112431	32694	3123423311	32768	2221132431	32842	3332243111
32473	3343342421	32547	1322234321	32621	3111222131	32695	1321224321	32769	2244332311	32843	2223312321
32474	2234431231	32548	1334233231	32622	3124342231	32696	1324224311	32770	1132332431	32844	1322444221
32475	3121244321	32549	1112444321	32623	2234213211	32697	3132433231	32771	3124322211	32845	2213243211
32476	1342211311	32550	2231133431	32624	2224431331	32698	3311224311	32772	3324432231	32846	3124224331
32477	1332233121	32551	3324422311	32625	1334434331	32699	3112213231	32773	1333122211	32847	3124443121
32478	1321134211	32552	1343123121	32626	3344342321	32700	3324243231	32774	1344224221	32848	1321323321
32479	3344423231	32553	2223421331	32627	2243311331	32701	3133123111	32775	1312243221	32849	3132121321
32480	1133342431	32554	3344322321	32628	1112323121	32702	2212232311	32776	1343421331	32850	1133233221
32481	3343224321	32555	3122444311	32629	3123431211	32703	1112322311	32777	3112334431	32851	2231322121
32482	1344334421	32556	3323344421	32630	3324312421	32704	1123133131	32778	3311234211	32852	3321324221
32483	1131224311	32557	2213222111	32631	3331243211	32705	3344324321	32779	3123113221	32853	1132223131
32484	1333443231	32558	2243344421	32632	1344213221	32706	3133442331	32780	2213421121	32854	1344342231
32485	2232134211	32559	1331344321	32633	3124233111	32707	3121322331	32781	2234421221	32855	1132334431
32486	3122244421	32560	1332232131	32634	1322434211	32708	1324324231	32782	3313212211	32856	1324423231
32487	2224423231	32561	3124422331	32635	3322333121	32709	1133221231	32783	1134213231	32857	2221331331
32488	3313342321	32562	3344243321	32636	2243423311	32710	3334423311	32784	1132232111	32858	2223132231
32489	3313244331	32563	3324223231	32637	1324312311	32711	3111244331	32785	1344323421	32859	1131244221
32490	2211334421	32564	3111332131	32638	3312243311	32712	2221331311	32786	1122213311	32860	1331331211
32491	1332334321	32565	3112442211	32639	1133244421	32713	1334233121	32787	2234223111	32861	1123224231
32492	1134222431	32566	3112422431	32640	2233423121	32714	1323312211	32788	3133233221	32862	3313322231
32493	2242331121	32567	3343421221	32641	1122444311	32715	1312344331	32789	1322343111	32863	1321331131
32494	1124321221	32568	3323213321	32642	1113324231	32716	1323232111	32790	1323221311	32864	2223224231
32495	3312332321	32569	2242132421	32643	1333113231	32717	1313322211	32791	1332423311	32865	3131242331
32496	3133233111	32570	2233243431	32644	3331213221	32718	2242244421	32792	3323321231	32866	1312233121
32497	1322213421	32571	3311213221	32645	2233244221	32719	3313443121	32793	1132242211	32867	1342332131
32498	1333224311	32572	1324223231	32646	2242443121	32720	1122122431	32794	2242233421	32868	1124231331
32499	3112434331	32573	3324331211	32647	2243342221	32721	2221122131	32795	3124213331	32869	3113443211
32500	2244433421	32574	2233344211	32648	1113442221	32722	1331332311	32796	1321122421	32870	3322312311



1998 Subaru Forester 30001-37850

32871	1121334231	32945	3342343421	33019	1124233111	33093	1112324311	33167	2233221211	33201	2213133431
32872	3124422111	32946	3311313321	33020	3122422111	33094	1132442231	33168	3132432421	33202	3322113431
32873	1332443131	32947	3132113331	33021	3133221121	33095	1324213331	33169	1131122231	33203	3131243211
32874	3313221211	32948	1344322211	33022	2224434231	33096	3343212331	33170	3311223121	33204	3321223131
32875	3124433311	32949	1124213421	33023	1122332111	33097	1132233321	33171	1124432211	33205	3112324311
32876	2213233221	32950	2232332431	33024	3311342211	33098	1122213421	33172	3332244431	33206	1321244431
32877	3132133221	32951	3113442421	33025	1132223311	33099	1333222131	33173	2234211321	33207	2213421211
32878	1322313211	32952	3112223131	33026	2244323421	33100	1133444221	33174	2233432231	33208	1331242311
32879	2223133131	32953	2221344221	33027	3132424431	33101	1322434231	33175	3123342311	33209	2243223331
32880	1313344231	32954	3324324431	33028	1124422131	33102	1113324321	33176	1344244221	33210	3344343111
32881	3312113331	32955	1324422421	33029	3132213231	33103	3133421211	33177	1132232131	33211	1113213421
32882	1113222331	32956	1334424321	33030	2244223321	33104	3311123421	33178	1131344211	33212	3343321211
32883	2213332111	32957	3123311221	33031	3324421321	33105	1123332231	33179	1133423431	33213	1344232431
32884	1133122211	32958	3113434231	33032	1324442111	33106	3112243311	33180	3112433431	33214	1332432311
32885	3323112321	32959	3332134211	33033	2243231121	33107	1122343111	33181	1321224211	33215	3322313321
32886	2211233311	32960	3121223131	33034	1131324431	33108	1124234321	33182	3334232131	33216	2233431131
32887	2213432211	32961	3332221311	33035	1331134421	33109	3133243231	33183	1342442311	33217	2231233311
32888	1123421311	32962	1343312231	33036	1324324321	33110	3112243311	33184	2243334431	33218	3343224231
32889	2244213331	32963	2231233111	33037	3342432231	33111	1133132221	33185	1344322121	33219	2234222431
32890	2242234211	32964	2213122231	33038	1322134221	33112	2212434311	33186	3334231211	33220	3111342321
32891	1313312311	32965	3343243111	33039	3313213421	33113	1324343311	33187	1333122121	33221	3134431321
32892	3123431231	32966	3342312311	33040	3322112421	33114	3311244331	33188	2213124431	33222	1331221321
32893	3331223321	32967	3343122311	33041	11311124231	33115	1112243221	33189	2211123221	33223	1333212431
32894	3113244421	32968	3322431131	33042	3133444331	33116	1313211221	33190	3344422131	33224	2213311321
32895	1321121321	32969	3322331211	33043	1333123131	33117	1323323121	33191	3342242311	33225	2243121231
32896	3112342331	32970	2244221231	33044	1331122231	33118	1113422311	33192	1112443131	33226	2232312321
32897	3313342231	32971	1322131321	33045	2243224431	33119	3313112311	33193	1343443421	33227	3343124331
32898	3343113311	32972	1343312431	33046	3342122121	33120	2212443111	33194	2242213331	33228	3343244211
32899	3122322431	32973	3342422111	33047	3134234311	33121	2242443211	33195	1332124311	33229	3111344211
32900	1323221331	32974	2233322121	33048	2234221131	33122	1324323311	33196	2231331121	33230	1113243211
32901	2224443211	32975	3122243211	33049	2234231231	33123	2213334421	33197	3132422121	33231	1133234231
32902	3133444221	32976	1334431211	33050	3113122321	33124	1123322111	33198	3313244421	33232	1124343311
32903	3321322131	32977	1311313321	33051	2211334331	33125	1331213421	33199	1134432111	33233	3323113421
32904	1313342431	32978	3323223131	33052	1131334311	33126	3123123211	33200	3312444231	33234	2232431231
32905	1113213221	32979	3332211231	33053	3121321321	33127	2231234231				
32906	3324422421	32980	2213311231	33054	3124233311	33128	3124322321				
32907	1321333421	32981	1122233421	33055	3124233131	33129	2232133111				
32908	1121331331	32982	3312431211	33056	2233422421	33130	3332134431				
32909	3324322431	32983	1113322121	33057	3331223431	33131	3323343311				
32910	3122331211	32984	1123113331	33058	1342331121	33132	3132424321				
32911	3112443331	32985	3321311331	33059	2223132121	33133	2231233221				
32912	3122313321	32986	3134243131	33060	1321223111	33134	1133342321				
32913	1331233131	32987	1132423131	33061	2231324431	33135	3322133431				
32914	3343421331	32988	1113243231	33062	1133443121	33136	2213334221				
32915	1123334231	32989	3344223431	33063	3123313221	33137	3113442131				
32916	3332133221	32990	3313221321	33064	3331131321	33138	1333221211				
32917	1113444331	32991	3122211331	33065	1322131121	33139	1132422321				
32918	1324213311	32992	3111344431	33066	2244332131	33140	3311223321				
32919	1332243311	32993	2221313421	33067	1322442331	33141	2211232231				
32920	1133213421	32994	3124431331	33068	3312433321	33142	1344234431				
32921	3124323311	32995	1321342311	33069	3132232131	33143	3131234231				
32922	2232232111	32996	3124324211	33070	3112211231	33144	3113224221				
32923	3334212331	32997	3332433211	33071	3113332221	33145	2221343121				
32924	3112442231	32998	1132134231	33072	2244321221	33146	1331223321				
32925	1311321221	32999	1312312431	33073	1131234211	33147	2213223121				
32926	3342134421	33000	1342133121	33074	2244432321	33148	1133224331				
32927	2212231211	33001	3133111231	33075	1331232231	33149	2233222331				
32928	3312324421	33002	2244423121	33076	1324234431	33150	2243231211				
32929	2231311321	33003	3313124231	33077	1344231311	33151	1331123221				
32930	2243344311	33004	2213442131	33078	1321124221	33152	3124213311				
32931	3123313421	33005	3112242231	33079	1324334221	33153	2224442131				
32932	3311243231	33006	1334211321	33080	3113331211	33154	1332131131				
32933	3133212431	33007	3311332421	33081	1323312231	33155	3124243321				
32934	1324233311	33008	2243222431	33082	1342223121	33156	2213443231				
32935	1331213311	33009	3324342121	33083	2224332421	33157	3343122111				
32936	3134221331	33010	3313421121	33084	1311334221	33158	3322422311				
32937	1122431221	33011	2242332421	33085	3321234331	33159	3343443421				
32938	2211344211	33012	3123122111	33086	2243331131	33160	3123342221				
32939	2234442121	33013	2224431311	33087	3343311311	33161	1134342111				
32940	3321342331	33014	3111324231	33088	1343322131	33162	3124442311				
32941	3331113321	33015	1333121221	33089	1312234221	33163	3113243121				
32942	1344431221	33016	1312443131	33090	1134231231	33164	2232133311				
32943	1342123421	33017	1122444221	33091	3133231131	33165	1312332231				
32944	1343123231	33018	2243321321	33092	1124213331	33166	2212112321				

medeco
HIGH SECURITY LOCKS

**The market
leader in
locking systems
for security,
safety, and
control.**

[Click here for more information](#)



1998 Subaru Forester 30001-37850

33235	3342211331	33309	1112433121	33383	1331231221	33457	1332213431	33531	1313222111	33605	3121221131
33236	1331244331	33310	3111223431	33384	3111243321	33458	1134231211	33532	1323213231	33606	1121332121
33237	1313221321	33311	1322433311	33385	3132443421	33459	1312442211	33533	3111332311	33607	1322331321
33238	3122113211	33312	1323123121	33386	1132213211	33460	1322123311	33534	1133322431	33608	2213242331
33239	3111322321	33313	2234432311	33387	1134231321	33461	2243133131	33535	3324213221	33609	1333423121
33240	3123422431	33314	2224342211	33388	2243112231	33462	2232111331	33536	1134443131	33610	1342112311
33241	1124244331	33315	1344342121	33389	1321344421	33463	3312322131	33537	3132434331	33611	2212231121
33242	2233122121	33316	1122231131	33390	1124333121	33464	1322122431	33538	1112243421	33612	1344321221
33243	1113322211	33317	2243212311	33391	2233221121	33465	1124224421	33539	3323112431	33613	2232443131
33244	2212443131	33318	3311221231	33392	3124321131	33466	3343344421	33540	1312432221	33614	3122321311
33245	3321244321	33319	1122231311	33393	1123343211	33467	3122243321	33541	2233324211	33615	3343324421
33246	1321243331	33320	3334433121	33394	1131134221	33468	2244423211	33542	3331232231	33616	2212434221
33247	3131234431	33321	1324243121	33395	2212332231	33469	3112122131	33543	1124432231	33617	1132422121
33248	3344331321	33322	3332111331	33396	3344433221	33470	1134423221	33544	3122443231	33618	1132434331
33249	1133344231	33323	1121233231	33397	1321213321	33471	1112434311	33545	3342443321	33619	1344232231
33250	3321124311	33324	1344234231	33398	3133222111	33472	3331233421	33546	2234224231	33620	3134211231
33251	2232134321	33325	3131134221	33399	2213122121	33473	2221324311	33547	3342421321	33621	2223134211
33252	1132322421	33326	3113344431	33400	2244312421	33474	3323421311	33548	1124422311	33622	3322134221
33253	1112232331	33327	1344343221	33401	1121243131	33475	2234311221	33549	3132133421	33623	3324323111
33254	2232232331	33328	1313222331	33402	1343323321	33476	3124443321	33550	1334342111	33624	1132434311
33255	2224334421	33329	2244212431	33403	1112242211	33477	3343322421	33551	2232432331	33625	1133423121
33256	1112432331	33330	2223332231	33404	1132423311	33478	1333444221	33552	1332244211	33626	2211132221
33257	3332234311	33331	1334311221	33405	2212443221	33479	2224332111	33553	3322422331	33627	3322443431
33258	3121324331	33332	1322322431	33406	1331331321	33480	3313442221	33554	2232312211	33628	2232432131
33259	1321312211	33333	1334234331	33407	1132332121	33481	1313311321	33555	3342433311	33629	3332213321
33260	1324442331	33334	2213421321	33408	3112431121	33482	3312421331	33556	1343223421	33630	1122433111
33261	1324311231	33335	1332131221	33409	3344432321	33483	3332431121	33557	1334331221	33631	1322124431
33262	2242231131	33336	2213124211	33410	1344324431	33484	2211221231	33558	3134211321	33632	1132431211
33263	1124231221	33337	1123123211	33411	1132133421	33485	1121124421	33559	2224332331	33633	1132443221
33264	3311344431	33338	3323312211	33412	2211122321	33486	1112343121	33560	3322344321	33634	3122133211
33265	1313221121	33339	1322344321	33413	2213434231	33487	1344422311	33561	1311234231	33635	2244232231
33266	3132434421	33340	3133231221	33414	1334442121	33488	2231344431	33562	3343422431	33636	1112433321
33267	3313343421	33341	3111234211	33415	3313421231	33489	1112443311	33563	3313444311	33637	3321123211
33268	3324312221	33342	3111321331	33416	1131342211	33490	1324431221	33564	2233311211	33638	3311244221
33269	3313224311	33343	3121334431	33417	3123442211	33491	1112243131	33565	3121243331	33639	1133423231
33270	2212332431	33344	1334443221	33418	3312323321	33492	3133242331	33566	1122342321	33640	3334231121
33271	2243113421	33345	2213422331	33419	1333442331	33493	3342431311	33567	3122432121	33641	2232134431
33272	1332122111	33346	2213213311	33420	3113234431	33494	1321213231	33568	2242111321	33642	2244311321
33273	3133113321	33347	3323311221	33421	2213223211	33495	3122332331	33569	1112232131	33643	2223443131
33274	3342112331	33348	2233422131	33422	1322243321	33496	1331312311	33570	3311343221	33644	3121221331
33275	3344233311	33349	2244323221	33423	3134211211	33497	1112223421	33571	3123133131	33645	2234422321
33276	3132223421	33350	1323121121	33424	3332444211	33498	1124424221	33572	1122433421	33646	3321321321
33277	1343422231	33351	1324221321	33425	1331122211	33499	3133422131	33573	3124423211	33647	2244343311
33278	3111331321	33352	3122332421	33426	3312122131	33500	1312323121	33574	3321322421	33648	3312132321
33279	1334433321	33353	3111242131	33427	1312313311	33501	3113332131	33575	3322131321	33649	1112333421
33280	1331312421	33354	3132213321	33428	1124233131	33502	3323342111	33576	3324442331	33650	1321123231
33281	1323311331	33355	1334432131	33429	3334243221	33503	2242344431	33577	1122442421	33651	1112422121
33282	3324221211	33356	3133213311	33430	3311244311	33504	1321121231	33578	1344423321	33652	3123322131
33283	3324332221	33357	3322424311	33431	1332434221	33505	3313344211	33579	3322342231	33653	3311312221
33284	3111333211	33358	3323211211	33432	3112422121	33506	1342224331	33580	1332311221	33654	1323424231
33285	3121122421	33359	1321221311	33433	3344344321	33507	2212431121	33581	1112432221	33655	3332211211
33286	3113312331	33360	1123124421	33434	1112423421	33508	3312123431	33582	1121233431	33656	1112213321
33287	2234224431	33361	1123123321	33435	2242133321	33509	1342111231	33583	1321331311	33657	3332432331
33288	3324221231	33362	2223434221	33436	2232132321	33510	1123312431	33584	1342443321	33658	3113212211
33289	3322423321	33363	2234334431	33437	1312322331	33511	3112134431	33585	2224334221	33659	3112244431
33290	1331332111	33364	3122323111	33438	3334432131	33512	3312311331	33586	3312322421	33660	3344322431
33291	3332112431	33365	1344334221	33439	3132433431	33513	1124322211	33587	3312213211	33661	1344322321
33292	3112434421	33366	2233133121	33440	1312442231	33514	3133111321	33588	3332124311	33662	1123444321
33293	2233121331	33367	1323213211	33441	2224343311	33515	1133244311	33589	1333222331	33663	1333423431
33294	1322243121	33368	3133243211	33442	2234233211	33516	1344244331	33590	1334334211	33664	1323321211
33295	3324243321	33369	1311342231	33443	2233443231	33517	3133422311	33591	1334211231	33665	1134433121
33296	2213422311	33370	1321313311	33444	2224332111	33518	1313213331	33592	2212212331	33666	1133421121
33297	1124223431	33371	3121122311	33445	3111244421	33519	2234342221	33593	2211323311	33667	1323423221
33298	1123344311	33372	2223342311	33446	3123342111	33520	3124223321	33594	1133324211	33668	3312343321
33299	1311243211	33373	2233421321	33447	2243422321	33521	1122332421	33595	2231232431	33669	3122211311
33300	3121124331	33374	1123312321	33448	1113222131	33522	1324422131	33596	3113342231	33670	1122423431
33301	1322211331	33375	1321112431	33449	2224442111	33523	1312434331	33597	2221123231	33671	3332242231
33302	1331342431	33376	2223121121	33450	3113242111	33524	1113342231	33598	1133433221	33672	1342344231
33303	3112432311	33377	1134322311	33451	2233122321	33525	3324442111	33599	3311322121	33673	1132231121
33304	3123243421	33378	3122344231	33452	3313122211	33526	1344344321	33600	1134431231	33674	3112122331
33305	2243221331	33379	3122442111	33453	1333112331	33527	3313223231	33601	1331132331	33675	2244242131
33306	1134422321	33380	1311231331	33454	3123132231	33528	1332432331	33602	3323221131	33676	3323123231
33307	1342431221	33381	3323211231	33455	1133222311	33529	1134422121	33603	1334213321	33677	1133112221
33308	3311324231	33382	3322321131	33456	3344431221	33530	3323442321	33604	1321344221	33678	2243343211



1998 Subaru Forester 30001-37850

33679	1132342111	33753	2234434331	33827	3123244231	33901	3132111221	33935	3124432431	33969	2212133221
33680	3121123431	33754	2244312311	33828	1322311321	33902	1334332431	33936	1123121231	33970	1334321231
33681	2234334231	33755	3342123131	33829	1324423211	33903	1322344231	33937	2234322421	33971	1343313421
33682	1133432121	33756	1331212211	33830	3121243311	33904	3322424421	33938	1131122321	33972	3323313221
33683	2231233131	33757	1133424421	33831	3134244231	33905	3131133231	33939	3122443321	33973	1134223331
33684	1342312221	33758	3123223131	33832	2233122431	33906	2232312431	33940	1112233431	33974	1332332431
33685	2232233121	33759	2242334421	33833	3133132421	33907	1121233321	33941	2243431121	33975	3124332421
33686	1312421311	33760	3123433211	33834	1334344311	33908	3321313311	33942	3121342311	33976	3313322211
33687	3113424311	33761	3112421331	33835	1113331231	33909	2244223431	33943	2233422111	33977	1322433221
33688	3313123311	33762	2212243331	33836	3332232131	33910	1124334421	33944	1344233311	33978	1313443121
33689	2243342331	33763	3342132311	33837	1112313421	33911	2232213431	33945	1112444231	33979	2213443211
33690	2244333121	33764	1344344211	33838	1134213321	33912	2233224311	33946	1332221331	33980	3133424331
33691	3332443311	33765	3121124221	33839	3342442331	33913	3323424431	33947	2233121221	33981	3122342431
33692	3342244311	33766	2231344321	33840	3121342331	33914	1312444211	33948	3124221231	33982	2231332311
33693	1344243231	33767	1121344331	33841	1313443211	33915	1123244231	33949	1344234211	33983	2244234211
33694	1131243321	33768	2221334211	33842	3124321221	33916	1311334311	33950	3313213311	33984	3334223111
33695	3122344211	33769	2233132111	33843	1344332331	33917	1334212331	33951	1323342131	33985	1134434331
33696	3134221221	33770	3332421311	33844	2212344421	33918	3312342421	33952	2232231121	33986	3113442111
33697	3312122311	33771	3111343221	33845	1311234211	33919	3132213211	33953	3344432211	33987	3133223321
33698	1332212311	33772	2223332431	33846	3124344231	33920	1342242311	33954	1131224221	33988	3334432111
33699	3323443221	33773	1323112211	33847	1133243431	33921	1332324331	33955	3322342121	33989	3312132121
33700	1334321211	33774	3133123131	33848	2213321331	33922	1132122331	33956	1122132131	33990	3321244231
33701	1332344421	33775	2223313311	33849	3334443221	33923	2224321331	33957	3311223431	33991	3313223321
33702	3313323111	33776	1321213431	33850	3313422311	33924	2233232431	33958	1323343121	33992	1332223311
33703	2223431121	33777	3312444211	33851	1324421321	33925	1122423121	33959	1124211331	33993	2243244321
33704	1122123311	33778	1324331231	33852	1133123131	33926	3131122121	33960	1113233131	33994	3323122331
33705	3112322111	33779	2213233421	33853	2211342231	33927	3112332211	33961	1312234311	33995	3121121321
33706	2223321231	33780	1133222111	33854	1123423111	33928	1122131321	33962	1342122321	33996	3113122231
33707	3313442111	33781	1342243121	33855	1132331221	33929	3111244221	33963	2231132131	33997	1323342221
33708	3331113431	33782	2211124321	33856	2233132131	33930	3312422121	33964	1124244311	33998	3324223121
33709	2211223321	33783	3343422321	33857	1342342231	33931	1344242111	33965	3113443121	33999	3321134321
33710	3113433131	33784	2234312231	33858	1342243211	33932	1311243431	33966	2231132421	34000	1124442131
33711	3133434211	33785	3321132321	33859	3123211321	33933	3321123321	33967	3342134331		
33712	3112133421	33786	3112333111	33860	1331243431	33934	3134223111	33968	3122233311		
33713	3312442121	33787	1311233131	33861	1123324421						
33714	1134223221	33788	2244244311	33862	1134242231						
33715	1342244421	33789	2234234311	33863	3344433421						
33716	3124323221	33790	3334421131	33864	3113221321						
33717	3132123321	33791	1323243311	33865	1133212431						
33718	1122134221	33792	2212312231	33866	3122423431						
33719	3134223131	33793	3124332131	33867	1321332211						
33720	3331131231	33794	2244242311	33868	1124442311						
33721	1334223131	33795	1342433421	33869	1334423421						
33722	1122134331	33796	3113321221	33870	1133344431						
33723	3311312421	33797	1322113431	33871	1123334431						
33724	2242331211	33798	1344422111	33872	1342123111						
33725	3331121221	33799	1323442121	33873	3322434211						
33726	3113133231	33800	2242443431	33874	1344223321						
33727	1334421221	33801	1344332311	33875	3112132121						
33728	2212333221	33802	2232234311	33876	3342243431						
33729	3323323211	33803	3321323121	33877	3134231231						
33730	1331334311	33804	1113423121	33878	3112242211						
33731	1332231231	33805	3132234331	33879	1124322321						
33732	1323421311	33806	1122311321	33880	2213222331						
33733	1332244431	33807	2242243431	33881	2223112231						
33734	3113334221	33808	2211324431	33882	1333113431						
33735	3112233121	33809	3342442221	33883	1324322321						
33736	3334243111	33810	1323244211	33884	1123442431						
33737	1343122331	33811	3342134221	33885	1333443321						
33738	3323123321	33812	3343243311	33886	1334332321						
33739	2233112331	33813	2234331131	33887	1122334421						
33740	1131133321	33814	2242312331	33888	3321313421						
33741	2234322111	33815	1332122131	33889	3113432231						
33742	2211243211	33816	3344224331	33890	1131243431						
33743	3112434311	33817	1322312331	33891	3123123321						
33744	1311343421	33818	3331243231	33892	1334322111						
33745	3311344231	33819	1132211321	33893	1123344421						
33746	1332342311	33820	2224433221	33894	2234243311						
33747	2233344321	33821	1133242111	33895	3112232111						
33748	2243324331	33822	1134443311	33896	1312212311						
33749	1323124221	33823	1324332131	33897	3342111231						
33750	2233433421	33824	2221334431	33898	3134431231						
33751	1133242311	33825	2231231331	33899	3121332431						
33752	3112432421	33826	3124423431	33900	2234331311						

TNL

NATIONAL
 AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

www.laserkey.com

BUSINESS BRIEFS

Stanley Appointments

Chuck Murray has been appointed Director of Marketing Services for Stanley Hardware. Murray's promotion is part of a management reorganization at Stanley which consolidates responsibilities for marketing support activities for consumer, commercial and industrial segments under a single head.



David A. Kelman of West Hartford, Connecticut has also been named Marketing Specialist for Stanley Hardware.

Greg Drake Named Product Manager

Greg Drake has been named product manager for security door hardware and for all Detex access control products. Drake will be responsible for development and marketing of the company's panic hardware products and for its line of access control products.

All Lock is now BWD Automotive

All-Lock now has a new name - BWD Automotive, Alabama, a part of the Engine Systems Group of Echlin Inc.

On January 16, 1998, Echlin closed on the purchase of the assets of General Automotive Specialty Co., All-Locks's parent company. Fax and phone numbers have not changed. In fact, except for some upcoming changes to packaging and literature, BWD will continue to design and manufacture the same high quality locks and keys the locksmith has come to expect.

Rusty Alsbrook, Vice President of Sales, Tom Seroogy, Locks Product Manager, and Anita Owen, Assistant Sales Manager, will continue to serve the locksmith with technical assistance and sales on automotive locks, keys and service kits. For more information contact BWD at 334-874-9001.

American Lock® Parts List for Padlocks

American Lock Company®, has published a new Service Parts List. It reflects new package quantity configurations, new model numbers and updated pricing for American Lock key blanks, cylinders, shackles, retainers, cover plates, rim and mortise parts, etc. It includes parts required to service American Lock's newest padlocks such as solid steel Models 780, 790, and 2010.

For copies of the new Service parts List call: 1-800-323-4568.

EXL Safe Corporation Moves

EXL Safe Corporation and its subsidiary, U.S. Security Safe, has announced that it has moved into a brand new state-of-the-art 51,000 sq. ft. manufacturing facility located at 4501 Etiwanda Ave. in Mira Loma, CA.

The building was constructed specifically to meet the requirements of this fast growing manufacturing company. The property includes EXL's executive offices, engineering staff, customer service department and manufacturing facility.

For more information contact EXL at: 4501 Etiwanda Ave., Mira Loma, CA 91752. Phone: 909/685-6500. Fax: 909/685-3300. E-mail: mail@exlsafe.com. Web: www.exlsafe.com.

STA Products

A new company with some familiar faces has entered the physical security market to supply low cost electro-magnetic locks, electric door strikes and specialty CCTV products to security dealers. STA Products, Inc. was formed by Barry Schweiger and Jonathon Schweiger



The company's headquarters are located in Farmingdale, New York, and can be reached at: 516-756-2800.

Marlee Electronics 25th Anniversary

In a world where many companies don't last a year, Marlee Electronics Corporation, a leader in entry and access control technology, is proud to announce the celebration of their 25th anniversary in business throughout 1998.

For more information, please contact Mr. Owen Barclay, Director of Sales and Marketing at 888-MARLEE (627-5331), by fax at 604-904-9637 or via e-mail to obarclay@infinet.net.

Reading Adds 60,000 Square Feet

Reading Body Works, Inc. broke ground this past Spring for a 60,000 Sq. ft manufacturing addition for their standard production area. The focus of this



construction is to add much-needed capacity to the standard product assembly, modifications, priming, powder coating and service operations areas, as well as increasing potential production volume of custom bodies.

Security Lock Customer Service Addition

Robert Greenlaw has been appointed to a post in Security Lock Distributors' expanding customer service department. He is a specialist in



the application, installation and maintenance of electrical and mechanical access control products.

For additional information: Phone: 800-847-5625, Fax: 800-878-6400, web: <http://www.seclock.com>.

Chamberlain Group Acquired Sentex Systems

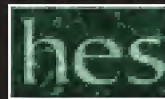
Chamberlain Group, Inc. has acquired Sentex Systems, Inc., of Chatsworth, California. The acquisition was announced by Robert Baker, chief executive officer of The Chamberlain Group, Inc.

Microwave Sensors Online

Microwave Sensors, Inc. of Ann Arbor, MI, has announced its new site on the world wide web. Visit us at www.microwavesensors.com

to learn more about the custom motion and presence sensors we design utilizing microwave, infrared and ultrasonic technologies.





TEST DRIVE!

I'm going to admit it right off the top that I am not a huge fan of this electronic lock revolution. I'm of the old school and think you can't beat a good reliable mechanical lock. That opinion, however, has taken a complete turn-around when I did an install and field test of the new Powerbolt 3000 by Weiser Lock. I must admit that after installing and using this lock for a while, I love it.

PRODUCT:

The Weiser Powerbolt 3000 is much more than just another electronic lock. The Powerbolt is one part of a complete home access system that can control exterior doors, an overhead garage door and home lighting. And it can all be controlled with a single three button electronic system remote. This is a unique package for the residential market.

COMPONENTS:

The Powerbolt 3000 consists of a deadbolt with LED, deadbolt latch, strike, power board, mounting plate, access cover, three button system remote control, keys and screws. It sounds like a lot of parts and components, but in actuality it isn't.

INSTALLATION:

After the standard 2-1/8" deadbolt and 1" deadbolt latch holes are drilled, or if installing in an existing mounting, install the deadbolt latch and deadbolt. The deadbolt latch is adjustable for either a 2-3/8" or 2-3/4" backset. The deadbolt is secured to the mounting plate provided.

There is a wire ribbon attached to the deadbolt that needs to be pushed through the door and attached to the power board. The wire ribbon is for the LED on the front of the deadbolt which indicates that the lock has been activated.

Powerbolt 3000 by Weiser Lock

With the ribbon cable attached, mount the power board to the mounting plate on the interior side with a few screws. Once the power board is installed, install four AA Alkaline batteries and snap the access cover in place.

Now all that is left is installing the strike plate and the installation is complete.

OPERATION:

The lock can be operated in one of four ways. The easiest and most convenient is with the system remote. Simply depress the remote button once to lock, and once again to unlock. There is also two activation buttons on the power board. One to lock the unit, the other to unlock. There is also a thumb-turn on the power board for the same reason. And of course a key will also lock and unlock the deadbolt.

When the Powerbolt is activated, the unit will give one audible beep indicating the deadbolt is locked. The LED on the face of the lock will also flash giving a visual verification that the lock is performing a function. When the unit is unlocked, an audible beep will sound two times and the LED will again flash giving a visual verification. You can also hear the actual motor turning which

throws and retracts the deadbolt.

OPTIONAL MODULES:

With a few add-on modules the Powerbolt 3000 Home Access System Remote can be expanded to operate home lighting or overhead garage door openers. A remote keypad is also available.

WARRANTY:

The deadbolt features the Weiser Brilliance finish, offering a full lifetime finish and anti-tarnish warranty.

There is a full lifetime mechanical warranty and a one year limited warranty on all electrical components.

CLOSING COMMENTS:

As I stated earlier, since installing this unit on a garage door, I love it. To date the Powerbolt 3000 has operated flawlessly, and I no longer need to fumble for my keys every time I want to access or egress my garage door.

The retail price of the Powerbolt 3000 is \$265.00.

This is a great product that once installed, you or your customers will come to love as well.

For more information on the Powerbolt 3000 by Weiser Lock, call: 800-343-9652. 

IN SUMMARY:

DESCRIPTION: Powerbolt 3000 by Weiser Lock is a remote controlled deadbolt and one part of The Home Access System offered by Weiser Lock.

COMMENTS: Easy to install, can be operated by anyone and is capable of not only operating the lock, but an overhead garage door opener and a remote lighting system as well.

PRICE: Retail price is \$265.00

TEST DRIVE RESULTS: Love this product. Once installed you or your customer will too.